

8566A
SPECTRUM ANALYZER
100 Hz — 2.5 GHz / 2 — 22 GHz

volume 2

Section IV
PERFORMANCE TESTS

Section V
ADJUSTMENTS

Section VI
REPLACEABLE PARTS

Section VII
MANUAL BACKDATING CHANGES

MANUAL CHANGES SUPPLEMENT

MAJOR ASSEMBLY AND COMPONENT LOCATIONS

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CONTENTS

—VOLUME 2—

Section	Page	Section	Page
IV PERFORMANCE TESTS	4-1	5-15. Low Voltage Power Supply	
4-1. Introduction.	4-1	Adjustments.	5-16
4-4. Operation Verification	4-1	5-16. High Voltage Adjustment	5-19
4-6. 8566A Repair.	4-1	5-17. Preliminary Display	
4-8. 8566A Repair and Certification	4-2	Adjustments.	5-22
4-10. Calibration Cycle.	4-2	5-18. Final Display Adjustments	5-34
4-12. Equipment Required	4-2	5-19. Log Amplifier Adjustments	5-37
4-14. Test Record	4-2	5-20. Video Processor Adjustments.	5-41
4-16. Frequency Reference Error Test.	4-3	5-21. 3 MHz Bandwidth Filter	
4-17. Center Frequency Readout		Adjustments.	5-44
Accuracy Test.	4-5	5-22. 21.4 MHz Bandwidth Filter	
4-18. Frequency Span Accuracy Test	4-8	Adjustments.	5-49
4-19. Resolution Bandwidth		5-23. 3-dB Bandwidth Adjustments	5-57
Accuracy Test.	4-13	5-24. Step Gain and 18.4 MHz Local	
4-20. Resolution Bandwidth		Oscillator Adjustments.	5-60
Selectivity Test	4-15	5-25. Down/Up Converter	
4-21. Resolution Bandwidth Switching		Adjustments.	5-66
Uncertainty Test	4-18	5-26. 10 MHz Standard Adjustment	5-68
4-22. Log Scale Switching		5-27. Sweep, DAC, and Main Coil	
Uncertainty Test	4-20	Driver Adjustments	5-70
4-23. IF Gain Uncertainty Test	4-22	5-28. 100 MHz Voltage-Controlled Crystal	
4-24. Scale Fidelity Test.	4-29	Oscillator (VCXO) Adjustments.	5-80
4-25. Calibrator Amplitude		5-29. M/N Loop Adjustments	5-84
Accuracy Test.	4-33	5-30. YTO Loop Adjustments	5-88
4-26. Frequency Response Test	4-34	5-31. 20/30 Loop Phase Lock	
4-27. Sweep Time Accuracy Test	4-48	Adjustments.	5-92
4-28. Sweep Time Accuracy Test		5-32. RF Module Phase Lock	
(Alternate Procedure).	4-51	Adjustments.	5-100
4-29. Noise Sidebands Test	4-55	5-33. CAL Output Adjustment	5-103
4-30. Line Related Sidebands Test	4-57	5-34. Last Converter Adjustments	5-106
4-31. Average Noise Level Test	4-62	5-35. Frequency Response	
4-32. Residual Responses Test	4-64	Adjustments.	5-109
4-33. Harmonic and Intermodulation		5-36. Analog-to-Digital Converter	
Distortion Test	4-68	Adjustments.	5-131
4-34. Image, Multiple, and Out-of-Band		5-37. Track and Hold Adjustments.	5-133
Responses Test	4-76	5-38. Digital Storage Display Adjustment.	5-136
4-35. Gain Compression Test.	4-80		
4-36. 1st LO Output Amplitude Test	4-84	VI REPLACEABLE PARTS	
4-37. Sweep + Tune Out Accuracy Test.	4-85	6-1. Introduction.	6-1
		6-3. How to Determine a Replacement	
		Part Number.	6-1
		6-8. Ordering Instructions.	6-1
		6-10. Module Exchange Program	6-1
V ADJUSTMENTS		VII MANUAL BACKDATING CHANGES	
5-1. Introduction.	5-1	7-1. Introduction.	7-1
5-3. Equipment Required	5-2	7-4. Change Instructions for	
5-5. Adjustment Tools	5-2	RF Sections	7-3
5-7. Factory Selected Components	5-2	7-16. Change Instructions for	
5-9. Related Adjustments	5-2	IF-Display Sections	7-13
5-11. Location of Test Points and			
Adjustments.	5-2		
5-13. Safety Considerations.	5-2		

SECTION IV PERFORMANCE TESTS

4-1. INTRODUCTION

4-2. The procedures in this section test the instrument's electrical performance using the specifications in Tables 1-1 and 1-2 as the performance standards. None of the tests require access to the interior of the instrument. The manual performance tests provided in this section should be performed only if semi-automatic test equipment (for Operation Verification) is not available. Operation Verification requires much less time and test equipment to verify compliance with specifications.

4-3. If a test measurement is marginal, go to Section V and perform adjustment procedures. When an adjustment is directly related to a performance test, the adjustment procedure is referenced under RELATED ADJUSTMENT in the procedure.

4-4. OPERATION VERIFICATION

4-5. The 8566A Operation Verification is a semiautomatic test procedure that verifies compliance with specifications listed in Tables 1-1 and 1-2 to a confidence level of greater than 70%. It is recommended for incoming inspection and as a test of instrument performance after repair. Operation Verification is described in Section II.

4-6. 8566A REPAIR

4-7. After repair of any 8566A, the Operation Verification procedure should be used, rather than performing all of the manual performance tests, to verify compliance with specifications. An HP 9866A/B or HP 9871A printer should be used with the HP 9825A Desktop Computer to provide a permanent detailed test record.

Table 4-1. Performance Test Cross Reference

Function or Characteristic Tested	Para. No.	Paragraph Title
Frequency Reference	4-16	Frequency Reference Error Test
Center Frequency Readout	4-17	Center Frequency Readout Accuracy Test
Frequency Spans	4-18	Frequency Span Accuracy Test
3-dB Bandwidths	4-19	Resolution Bandwidth Accuracy Test
Bandwidth Shape	4-20	Resolution Bandwidth Selectivity Test
Bandwidth Amplitudes	4-21	Resolution Bandwidth Switching Uncertainty Test
Log Scales	4-22	Log Scale Switching Uncertainty Test
IF Gains	4-23	IF Gain Uncertainty Test
Log and Linear Amplifier Fidelity	4-24	Scale Fidelity Test
CAL OUTPUT Level	4-25	Calibrator Amplitude Accuracy Test
Frequency Response	4-26	Frequency Response Test
Sweep Times	4-27	Sweep Time Accuracy Test
Noise Sidebands	4-28	Noise Sidebands Test
Line Related Sidebands	4-29	Line Related Sidebands Test
Noise Floor	4-30	Average Noise Level Test
Residual Responses	4-31	Residual Responses Test
Harmonic and Intermodulation Distortion	4-32	Harmonic and Intermodulation Distortion Test
Image, Multiple, and Out-of-Band Responses	4-33	Image, Multiple, and Out-of-Band Responses Test
Gain Compression	4-34	Gain Compression Test
1ST LO OUTPUT Amplitude	4-35	1ST LO OUTPUT Amplitude Test
SWEEP + TUNE OUT	4-36	SWEEP + TUNE OUT Accuracy Test

4-8. 8566A REPAIR AND CERTIFICATION

4-9. When a complete repair and certification or calibration and certification is required, proceed as follows:

- a. After repair (if required), run the Operation Verification program using an HP 9825A Desktop Computer. An HP 9866A/B or 9871A printer must be used to provide a permanent test record.
- b. The Operation Verification program verifies compliance with specifications of all tests except:
 - Frequency Reference Error
 - Sweep Time Accuracy
 - Noise Sidebands
 - Residual Responses
 - Harmonic and Intermodulation Distortion
 - Image, Multiple, and Out-of-Band Responses
 - 1ST LO Output Amplitude

These tests must be performed manually (Refer to Table 4-1 for paragraph numbers).

4-10. CALIBRATION CYCLE

4-11. This instrument requires periodic verification of performance. The instrument should be checked in the manner described in Paragraph 4-9, at least every six months.

4-12. EQUIPMENT REQUIRED

4-13. Equipment required for Operation Verification or manual performance tests is listed under Recommended Test Equipment, Table 1-4, in Section I. Any equipment that satisfies the critical specifications given in the table may be substituted for the recommended model.

4-14. TEST RECORD

4-15. The Operation Verification program provides a detailed test record when a printer is used with the desktop computer. If manual performance tests are done, results of the performance tests may be tabulated on the Test Record at the end of this section. The Test Record lists all of the tested specifications and the acceptable ranges for the measurement values obtained during the tests.

PERFORMANCE TESTS

NOTE

Allow 1/2-hour warm-up time for the 8566A before beginning the Performance Tests.

4-16. FREQUENCY REFERENCE ERROR TEST

RELATED ADJUSTMENT:

10 MHz Standard Adjustment

SPECIFICATION:

$< 1 \times 10^{-9}$ /day and $< 2 \times 10^{-7}$ /year; attained after 24-hour warm-up from cold start at 25°C.

DESCRIPTION:

The frequency of the spectrum analyzer time base oscillator is measured directly using a frequency counter locked to a frequency reference which has an aging rate less than one-tenth that of the time base specification. After a 24-hour warm-up period, a frequency measurement is made. The analyzer is left undisturbed for a second 24-hour period and a second reading is taken. The frequency change over this second 24-hour period must be less than one part in 10^9 .

NOTE

This test requires a minimum of 48 hours to complete. During the 24-hour warm-up time, other performance tests may be performed on the analyzer. However, care should be taken not to disturb the instrument during the period between frequency measurements, since the time base is sensitive to shock and vibration. The time base is also sensitive to temperature changes; for this reason the ambient temperature near the instrument at the first measurement time and the ambient temperature at the second measurement time should not differ by more than 1°C.

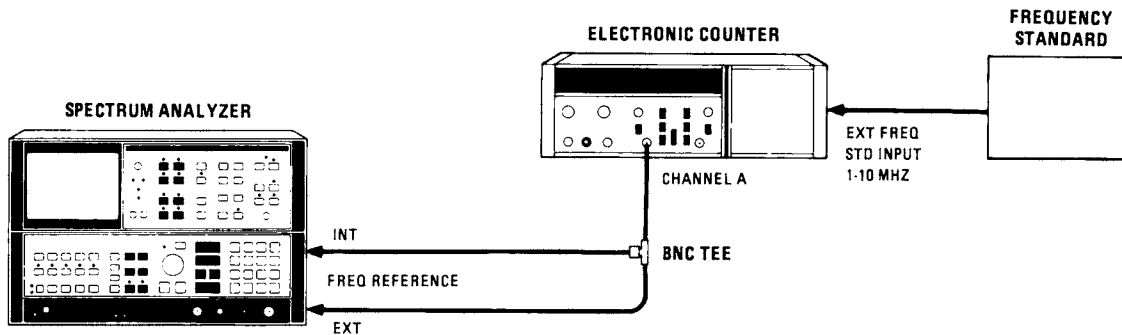


Figure 4-1. Frequency Reference Test Setup

EQUIPMENT:

Electronic Counter	HP 5345A
1, 2, 5, or 10 MHz Frequency Reference with aging rate $< 1 \times 10^{-10}$ /day	HP 5061A
BNC Tee (m)(f)(f).	HP 1250-0781

4-16. FREQUENCY REFERENCE ERROR TEST (Cont'd)

PROCEDURE:

1. Set controls of electronic counter as follows:

FUNCTION FREQ A
 DISPLAY POSITION AUTO
 GATE TIME 100 S
 CHANNEL A Input Impedance 50
 CHANNEL A ATTEN x1
 CHANNEL A Coupling AC
 CHANNEL A LEVEL midrange

2. Connect equipment as shown in Figure 4-1.
3. Allow analyzer to warm up at 25°C ambient temperature for a period of 24 hours.
4. Record the frequency of the analyzer time base as measured by the counter:

Frequency: 10. _____ MHz
 Date: _____ Time: _____
 Ambient Temperature: _____

5. Allow the analyzer to remain undisturbed for 24 hours, then note the time base frequency again:

Frequency: 10. _____ MHz
 Date: _____ Time: _____
 Ambient Temperature: _____

NOTE

If the ambient temperatures recorded in steps 4 and 5 differ by more than 1°C, the frequency measurements may be invalid.

6. The difference in frequency between the two measurements should be < 1 part in 10^9 (10^{-2} Hz).

REFERENCES:

- 1) Hewlett-Packard staff, "Timekeeping and Frequency Calibration," Application Note 52-2, (Hewlett-Packard, Palo Alto, CA 94304, November 1975).
- 2) Hewlett-Packard staff, "Measuring Warmup Characteristics and Aging Rates of Crystal Oscillators," Application Note 174-11, (Hewlett-Packard, Palo Alto, CA 94304, November 1974).

4-17. CENTER FREQUENCY READOUT ACCURACY TEST

RELATED ADJUSTMENTS:

10 MHz Standard Adjustment
Sweep, DAC, and Main Coil Driver Adjustments

SPECIFICATIONS:

For spans ≤ 5 MHz, $\pm (2\% \text{ of frequency span} + \text{frequency reference error} \times \text{center frequency} + 10 \text{ Hz})$.

For spans > 5 MHz, $\pm (2\% \text{ of frequency span} + n \times 100 \text{ kHz} + \text{frequency reference error} \times \text{center frequency})$, where n is the harmonic mixing number, depending upon center frequency:

n	center frequency
1	100 Hz to 5.8 GHz
2	5.8 GHz to 12.5 GHz
3	12.5 GHz to 18.6 GHz
4	> 18.6 GHz

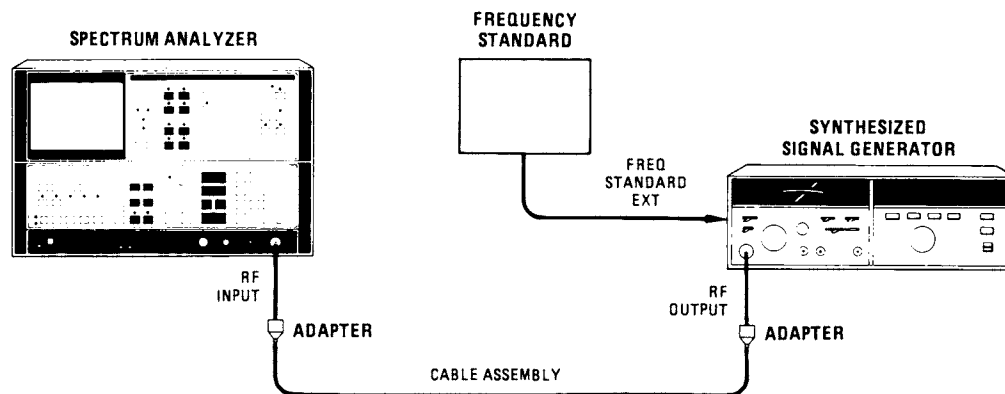


Figure 4-2. Center Frequency Test Setup

DESCRIPTION:

A synthesized signal source which is phase-locked to a known frequency standard is used to input a signal to the analyzer. The frequency readout of the analyzer is compared to the actual input frequency for several different frequency settings over the analyzer's range. By phase-locking the signal source to a standard known to be as accurate as the analyzer's internal time base, the "frequency reference error \times center frequency" term of the specification is made negligible.

4-17. CENTER FREQUENCY READOUT ACCURACY TEST (Cont'd)

EQUIPMENT:

Synthesized Signal Generator HP 8672A
 Frequency Standard a 10 MHz standard with accuracy within
 ± 1 part in 10^{-10} such as HP 5061A
 Adapter, Type N Male to SMA Female (2 required) HP 1250-1250
 61 cm (24 in.) Cable Assembly, SMA Male Connectors..... B&W 55-S142-55-24

PROCEDURE:

1. Connect CAL OUTPUT to RF INPUT.
2. Press 2-22 GHz, RECALL, 9
3. Adjust FREQ ZERO for a maximum amplitude trace.
4. Press 2-22 GHz
5. Set the synthesized signal generator settings for a 2.000000 GHz signal at a level of approximately 0 dBm.
6. Connect equipment as shown in Figure 4-2.
7. Set analyzer FREQUENCY SPAN and CENTER FREQUENCY and signal generator frequency according to Table 4-2. At each setting, press PEAK SEARCH, MKR ← CF to center the signal. Adjust REFERENCE LEVEL as necessary to place signal peak at a convenient level.
8. Record the CENTER readout frequency in the table for each setting. The limits for this frequency are given in the table. Refer to Figure 4-3.

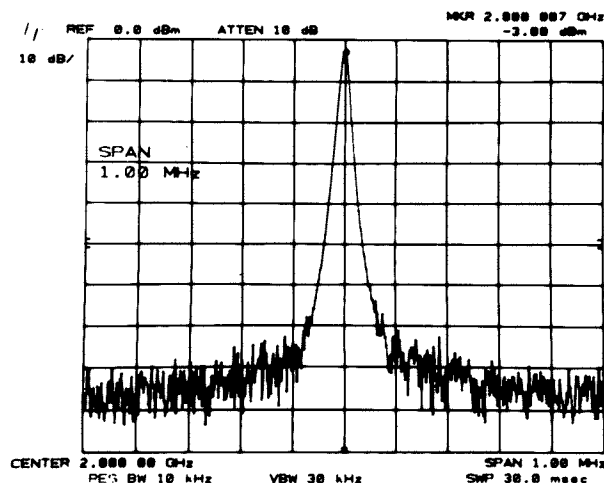


Figure 4-3. Center Frequency Accuracy Measurement

PERFORMANCE TESTS

4-17. CENTER FREQUENCY READOUT ACCURACY TEST (Cont'd)

Table 4-2. Center Frequency Readout Accuracy

SIGNAL GENERATOR FREQUENCY	FREQUENCY SPAN	CENTER FREQUENCY	CENTER Readout		
			Min.	Actual	Max.
2 GHz	1 MHz	2 GHz	1.999 98 GHz	—	2.000 02 GHz
2 GHz	10 MHz	2 GHz	1.999 7 GHz	—	2.000 3 GHz
2 GHz	100 MHz	2 GHz	1.998 GHz	—	2.002 GHz
2 GHz	1 GHz	2 GHz	1.98 GHz	—	2.02 GHz
3 GHz	1 MHz	3 GHz	2.999 98 GHz	—	3.000 02 GHz
3 GHz	10 MHz	3 GHz	2.999 7 GHz	—	3.000 3 GHz
3 GHz	100 MHz	3 GHz	2.998 GHz	—	3.002 GHz
3 GHz	1 GHz	3 GHz	2.98 GHz	—	3.02 GHz
6 GHz	1 MHz	6 GHz	5.999 98 GHz	—	6.000 02 GHz
6 GHz	10 MHz	6 GHz	5.999 6 GHz	—	6.000 4 GHz
6 GHz	100 MHz	6 GHz	5.998 GHz	—	6.002 GHz
6 GHz	1 GHz	6 GHz	5.98 GHz	—	6.02 GHz
9 GHz	1 MHz	9 GHz	8.999 98 GHz	—	9.000 02 GHz
9 GHz	10 MHz	9 GHz	8.999 6 GHz	—	9.000 4 GHz
9 GHz	100 MHz	9 GHz	8.998 GHz	—	9.002 GHz
9 GHz	1 GHz	9 GHz	8.98 GHz	—	9.02 GHz
9 GHz	10 GHz	9 GHz	8.8 GHz	—	9.2 GHz
12 GHz	1 MHz	12 GHz	11.999 98 GHz	—	12.000 02 GHz
12 GHz	10 MHz	12 GHz	11.999 6 GHz	—	12.000 4 GHz
12 GHz	100 MHz	12 GHz	11.998 GHz	—	12.002 GHz
12 GHz	1 GHz	12 GHz	11.98 GHz	—	12.02 GHz
12 GHz	10 GHz	12 GHz	11.8 GHz	—	12.2 GHz
15 GHz	1 MHz	15 GHz	14.999 98 GHz	—	15.000 02 GHz
15 GHz	10 MHz	15 GHz	14.999 5 GHz	—	15.000 5 GHz
15 GHz	100 MHz	15 GHz	14.998 GHz	—	15.002 GHz
15 GHz	1 GHz	15 GHz	14.98 GHz	—	15.02 GHz
15 GHz	10 GHz	15 GHz	14.8 GHz	—	15.2 GHz
18 GHz	1 MHz	18 GHz	17.999 98 GHz	—	18.000 02 GHz
18 GHz	10 MHz	18 GHz	17.999 5 GHz	—	18.000 5 GHz
18 GHz	100 MHz	18 GHz	17.998 GHz	—	18.002 GHz
18 GHz	1 GHz	18 GHz	17.98 GHz	—	18.02 GHz
18 GHz	10 GHz	18 GHz	17.8 GHz	—	18.2 GHz

4-18. FREQUENCY SPAN ACCURACY TEST

RELATED ADJUSTMENT:

Sweep, DAC, and Main Coil Driver Adjustments

SPECIFICATION:

For spans ≤ 5 MHz, $\pm 1\%$ of indicated frequency separation.

For spans > 5 MHz, $\pm 3\%$ of indicated frequency separation.

DESCRIPTION:

Spans less than 500 MHz are checked with a comb generator by comparing the displayed frequency span of two comb teeth with their known span. Wider spans are tested by tuning a source signal from one edge of the analyzer display to the other and measuring the frequency change with a frequency counter.

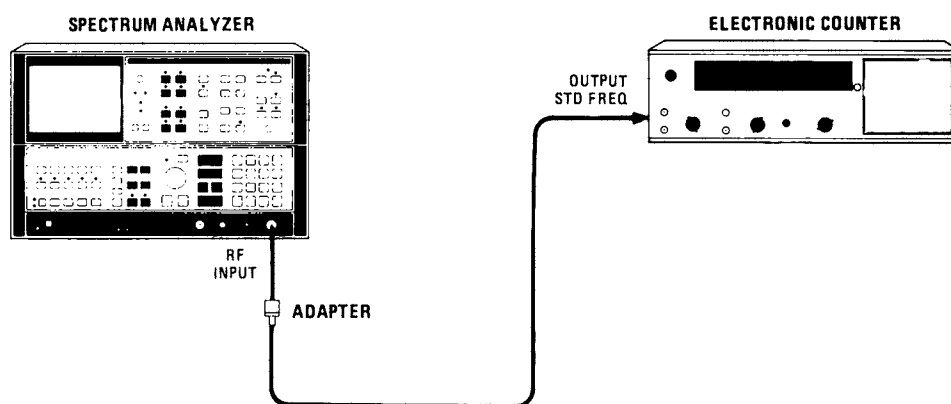


Figure 4-4. Narrow Span Test Setup

NOTE

Equipment listed is for two test setups, Figures 4-4 and 4-6.

EQUIPMENT:

Electronic Counter	HP 5245L
Frequency Counter	HP 5340A, Option H10
Sweep Oscillator	HP 8620C/86290B, Opt. H08
10 dB Attenuator	HP 8491B, Opt. 010
N Tee, (m)(f)(f)	HP 1250-0559
Adapter, Type N Male to BNC Female	HP 1250-0780

4-18. FREQUENCY SPAN ACCURACY TEST (Cont'd)

PROCEDURE:

1. Press 2-22
GHz.
2. Connect equipment as shown in Figure 4-4. MODE control on rear panel of the 5245L counter should be in INT STD FREQ position.
3. Set OUTPUT STD FREQ switch on rear panel of 5245L counter to the 1 kHz position.
4. Key in the following analyzer settings:

FREQUENCY SPAN		20 kHz
CENTER FREQUENCY		10 kHz
RES BW		100 Hz

5. Press MARKER NORMAL and place marker on first comb tooth (not the LO feedthrough) from the left edge of the graticule.

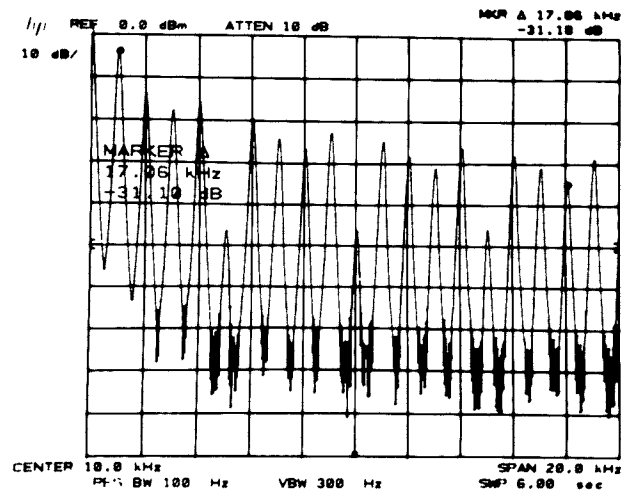


Figure 4-5. Narrow Span Measurement

PERFORMANCE TESTS

4-18. FREQUENCY SPAN ACCURACY TEST (Cont'd)

6. Press MARKER Δ and position marker at the 18th comb line from the left edge of the graticule (refer to Figure 4-5).
7. Using the procedure of steps 5 and 6, measure the frequency separation of the indicated comb lines for each setting in Table 4-3. The MARKER Δ frequency should be within the limits given in the table.
8. Disconnect electronic counter from analyzer input. Connect equipment as shown in Figure 4-6.

Table 4-3. Narrow Span Accuracy

Spectrum Analyzer			Electronic Counter	Comb Teeth	MARKER Δ frequency		
FREQUENCY SPAN	CENTER FREQUENCY	RES BW	OUTPUT STD FREQ		Min.	Actual	Max.
20 kHz	10 kHz	100 Hz	1 kHz	1st and 18th	16.84 kHz	_____	17.17 kHz
50 kHz	25 kHz	300 Hz	10 kHz	1st and 4th	29.71 kHz	_____	30.30 kHz
150 kHz	75 kHz	1 kHz	10 kHz	1st and 14th	128.8 kHz	_____	131.3 kHz
200 kHz	100 kHz	1 kHz	10 kHz	1st and 19th	178.3 kHz	_____	181.8 kHz
1 MHz	500 kHz	3 kHz	100 kHz	1st and 9th	793 kHz	_____	808 kHz
2 MHz	1 MHz	10 kHz	100 kHz	1st and 19th	1.783 MHz	_____	1.818 MHz
6 MHz	3 MHz	10 kHz	1 MHz	1st and 5th	3.884 MHz	_____	4.123 MHz
10 MHz	5 MHz	30 kHz	1 MHz	1st and 9th	7.77 MHz	_____	8.24 MHz
50 MHz	25 MHz	300 kHz	10 MHz	1st and 4th	29.13 MHz	_____	30.92 MHz
100 MHz	50 MHz	300 kHz	10 MHz	1st and 9th	77.7 MHz	_____	82.4 MHz

4-18. FREQUENCY SPAN ACCURACY TEST (Cont'd)

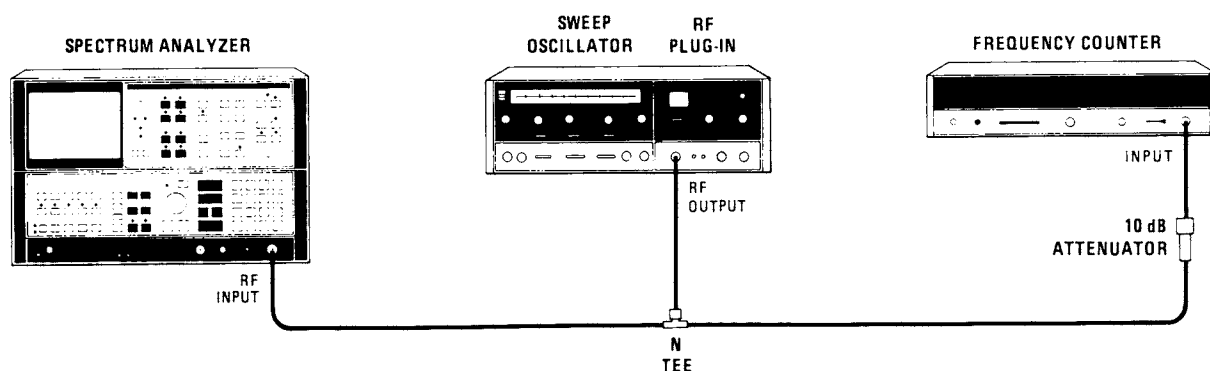


Figure 4-6. Wide Span Test Setup

9. Set 5340A counter to measure up to 20 GHz with a resolution of 100 kHz.

10. Press 2-22
GHz on the analyzer.

11. Set spectrum analyzer as follows:

CENTER FREQUENCY	.....	4 GHz
FREQUENCY SPAN	.....	500 MHz

12. Set RF Plug-In ALC control to INT and POWER LEVEL to 3 o'clock.

13. Observing analyzer display, adjust sweep oscillator for a 4 GHz CW signal with an amplitude of 0 dBm.

PERFORMANCE TESTS

4-18. FREQUENCY SPAN ACCURACY TEST (Cont'd)

14. Using the CW and CW VERNIER controls, set the sweep oscillator signal at the first vertical graticule line to the right of the left edge of the analyzer CRT graticule. Record the frequency of the signal as measured by the 5340A Frequency Counter:_____MHz.
15. Adjust CW and CW VERNIER on the sweep oscillator until the signal is at the 9th graticule line. Record the frequency from the counter readout:_____MHz.
16. The difference between the two frequencies recorded in steps 14 and 15 should be between 389 MHz and 412 MHz.
17. Set spectrum analyzer FREQUENCY SPAN and CENTER FREQUENCY according to Table 4-4 and measure the frequency span by the procedure of steps 13 through 16. The limits for the difference between the two frequency measurements are given in the table.

Table 4-4. Wide Span Accuracy

CENTER FREQUENCY	FREQUENCY SPAN	Counted Frequency		Measured Span (2-1)		
		1 1st grat. line	2 9th grat. line	min.	actual (2-1)	max.
4 GHz	500 MHz	_____	_____	389 MHz	_____	412 MHz
10 GHz	500 MHz	_____	_____	389 MHz	_____	412 MHz
15 GHz	500 MHz	_____	_____	389 MHz	_____	412 MHz
20 GHz	500 MHz	_____	_____	389 MHz	_____	412 MHz
4 GHz	1 GHz	_____	_____	777 MHz	_____	824 MHz
10 GHz	1 GHz	_____	_____	777 MHz	_____	824 MHz
15 GHz	1 GHz	_____	_____	777 MHz	_____	824 MHz
20 GHz	1 GHz	_____	_____	777 MHz	_____	824 MHz
10 GHz	5 GHz	_____	_____	3.884 GHz	_____	4.123 GHz
15 GHz	5 GHz	_____	_____	3.884 GHz	_____	4.123 GHz
18 GHz	5 GHz	_____	_____	3.884 GHz	_____	4.123 GHz
10 GHz	10 GHz	_____	_____	7.767 GHz	_____	8.247 GHz
15 GHz	10 GHz	_____	_____	7.767 GHz	_____	8.247 GHz

4-19. RESOLUTION BANDWIDTH ACCURACY TEST

RELATED ADJUSTMENT:

3-dB Bandwidth Adjustments

SPECIFICATION:

$\pm 20\%$, 10 Hz to 1 kHz and 3 MHz bandwidths

$\pm 10\%$, 3 kHz to 1 MHz bandwidths

30 kHz and 100 kHz bandwidth accuracy figures only applicable $\leq 90\%$ R.H.

DESCRIPTION:

The 3 dB bandwidth for each resolution bandwidth setting is measured with the MARKER function to determine bandwidth accuracy. The CAL OUTPUT is used for a stable signal source.

EQUIPMENT:

None Required

PROCEDURE:

1. Press **2-22 GHz**
2. Connect CAL OUTPUT to RF INPUT.
3. Key in spectrum analyzer settings as follows:

CENTER FREQUENCY	.....	100 MHz
FREQUENCY SPAN	.....	5 MHz
RES BW	.....	3 MHz
REFERENCE LEVEL	.....	- 10 dBm

4. Press SCALE LIN pushbutton. Press **SHIFT** , **AUTO** (resolution bandwidth).
5. Adjust **REFERENCE
LEVEL** to position peak of signal trace at reference level (top) graticule line. Press SWEEP **SINGLE** .

4-19. RESOLUTION BANDWIDTH ACCURACY TEST (Cont'd)

6. Press MARKER NORMAL and place marker at peak of signal trace with DATA knob. Press MARKER Δ and position movable marker 3 dB down from the stationary marker on the positive-going edge of the signal trace (the MARKER Δ amplitude readout should be 3.00 dB ± 0.05 dB). It may be necessary to adjust CENTER FREQUENCY to center trace on screen.
7. Press MARKER Δ and position movable marker 3 dB down from the signal peak on the negative-going edge of the trace (the MARKER Δ amplitude readout should be .00 dB ± 0.05 dB). The 3 dB bandwidth is given by the MARKER Δ frequency readout (see Figure 4-7). Record this value in Table 4-5.

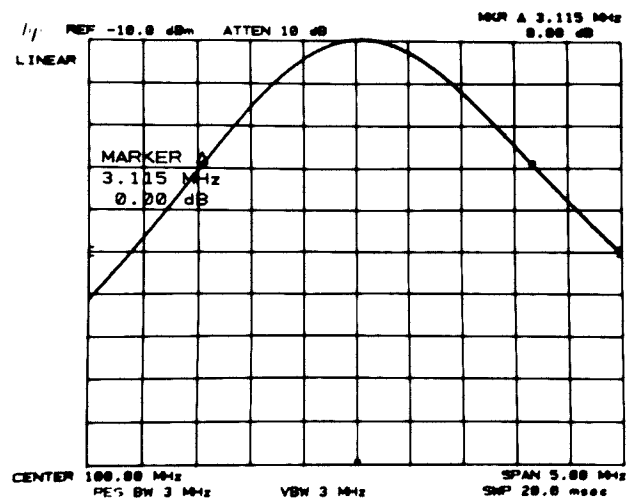


Figure 4-7. Resolution Bandwidth Measurement

PERFORMANCE TESTS

4-19. RESOLUTION BANDWIDTH ACCURACY TEST (Cont'd)

8. Vary spectrum analyzer settings according to Table 4-5. Press SWEEP and measure the 3 dB bandwidth for each resolution bandwidth setting by the procedure of steps 6 and 7 and record the value in Table 4-5. The measured bandwidth should fall between the limits shown in the table.

Table 4-5. Bandwidth Accuracy

RES BW	FREQUENCY SPAN	MARKER Δ Readout of 3 dB Bandwidth		
		Min.	Actual	Max.
3 MHz	5 MHz	2.400 MHz	_____	3.600 MHz
1 MHz	2 MHz	900 kHz	_____	1.100 MHz
300 kHz	500 kHz	270.0 kHz	_____	330.0 kHz
100 kHz	200 kHz	90.0 kHz	_____	110.0 kHz
30 kHz	50 kHz	27.00 kHz	_____	33.00 kHz
10 kHz	20 kHz	9.00 kHz	_____	11.00 kHz
3 kHz	5 kHz	2.700 kHz	_____	3.300 kHz
1 kHz	2 kHz	800 Hz	_____	1.200 kHz
300 Hz	500 Hz	240 Hz	_____	360 Hz
100 Hz	200 Hz	80 Hz	_____	120 Hz
30 Hz	100 Hz	24 Hz	_____	36 Hz
10 Hz	100 Hz	8.0 Hz	_____	12.0 Hz

4-20. RESOLUTION BANDWIDTH SELECTIVITY TEST

RELATED ADJUSTMENTS:

3 MHz Bandwidth Filter Adjustments

21.4 MHz Bandwidth Filter Adjustments

Step Gain and 18.4 MHz Local Oscillator Adjustments

SPECIFICATION:

60 dB/3 dB bandwidth ratio:

<15:1, 3 MHz to 100 kHz bandwidths

<13:1, 30 kHz to 10 kHz bandwidths

<11:1, 3 kHz to 30 Hz bandwidths

60 dB points on 10 Hz bandwidth are separated by <100 Hz

4-20. RESOLUTION BANDWIDTH SELECTIVITY TEST (Cont'd)


DESCRIPTION:





Bandwidth selectivity is found by measuring the 60 dB bandwidth and dividing this value by the 3 dB bandwidth for each resolution bandwidth setting from 30 Hz to 3 MHz. The 60 dB points for the 10 Hz bandwidth setting are also measured. The CAL OUTPUT provides a stable signal for the measurements.





EQUIPMENT:

None Required

PROCEDURE:

1. Press .
2. Connect CAL OUTPUT to RF INPUT.
3. Key in analyzer control settings as follows:

	..... 100 MHz
	..... 20 MHz
	..... 3 MHz
	..... 100 Hz

4. Press MARKER  and position marker at peak of signal trace. Press MARKER  and position movable marker 60 dB down from the stationary marker on the positive-going edge of the signal trace (the MARKER Δ amplitude readout should be 60.00 dB \pm 1.00 dB). It may be necessary to adjust  so that both 60 dB points are displayed (see Figure 4-8).
5. Press MARKER  and position movable marker 60 dB down from the signal peak on the negative-going edge of the signal trace (the MARKER Δ amplitude readout should be .00 dB \pm 0.50 dB).
6. Read the 60 dB bandwidth for the 3 MHz resolution bandwidth setting from the MARKER Δ frequency readout (see Figure 4-8) and record the value in Table 4-6.
7. Vary spectrum analyzer settings according to Table 4-6. Measure the 60 dB bandwidth for each resolution bandwidth setting by the procedure of steps 4 through 6 and record the value in Table 4-6.
8. Record the 3 dB bandwidths from Table 4-5 in Table 4-6.

PERFORMANCE TESTS

4-20. RESOLUTION BANDWIDTH SELECTIVITY TEST (Cont'd)

9. Calculate the bandwidth selectivity for each setting by dividing the 60 dB bandwidth by the 3 dB bandwidth. The bandwidth ratios should be less than the maximum values shown in Table 4-6.
10. The 60 dB bandwidth for the 10 Hz resolution bandwidth setting should be less than 100 Hz.

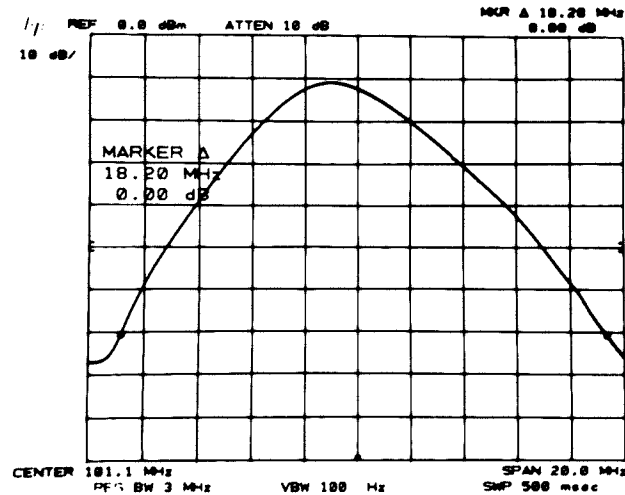


Figure 4-8. 60 dB Bandwidth Measurement

Table 4-6. Resolution Bandwidth Selectivity

Spectrum Analyzer			Measured 60 dB Bandwidth	Measured 3 dB Bandwidth	Bandwidth Selectivity (60 dB BW ÷ 3 dB BW)	Maximum Selectivity Ratio
RES BW	FREQUENCY SPAN	VIDEO BW				
3 MHz	20 MHz	100 Hz	_____	_____	_____	15:1
1 MHz	15 MHz	300 Hz	_____	_____	_____	15:1
300 kHz	5 MHz	AUTO	_____	_____	_____	15:1
100 kHz	2 MHz	AUTO	_____	_____	_____	15:1
30 kHz	500 kHz	AUTO	_____	_____	_____	13:1
10 kHz	200 kHz	AUTO	_____	_____	_____	13:1
3 kHz	50 kHz	AUTO	_____	_____	_____	11:1
1 kHz	10 kHz	AUTO	_____	_____	_____	11:1
300 Hz	5 kHz	AUTO	_____	_____	_____	11:1
100 Hz	2 kHz	AUTO	_____	_____	_____	11:1
30 Hz	500 Hz	AUTO	_____	_____	_____	11:1
10 Hz	100 Hz	AUTO	_____	_____	_____	11:1

4-21. RESOLUTION BANDWIDTH SWITCHING UNCERTAINTY TEST

RELATED ADJUSTMENTS:

3 MHz Bandwidth Filter Adjustments
 21.4 MHz Bandwidth Filter Adjustments
 Down/Up Converter Adjustments

SPECIFICATION:

(uncorrected; referenced to 1 MHz bandwidth; 20—30°C)

± 1.0 dB, 3 MHz to 10 Hz bandwidths
 ± 0.5 dB, 1 MHz to 30 Hz bandwidths
 30 kHz and 100 kHz bandwidth switching uncertainty figures only applicable $\leq 90\%$ R.H.

DESCRIPTION:

The CAL OUTPUT signal is applied to the input of the spectrum analyzer. The deviation in amplitude of the signal trace is then measured as each resolution bandwidth filter is switched in.

EQUIPMENT:

None Required

PROCEDURE:

1. Press 2-22
GHz.
2. Connect CAL OUTPUT to RF INPUT.
3. Key in the following control settings:

CENTER FREQUENCY	.....	100 MHz
FREQUENCY SPAN	.....	5 MHz
REFERENCE LEVEL	.....	−8 dBm
RES BW	.....	1 MHz

4. Press LOG ENTER
dB/DIV and key in 1 dB. Press MARKER PEAK
SEARCH, Δ.

PERFORMANCE TESTS

4-21. RESOLUTION BANDWIDTH SWITCHING UNCERTAINTY TEST (Cont'd)

6. Key in settings according to Table 4-7. Press MARKER PEAK
SEARCH at each setting, then read the amplitude deviation from the MARKER Δ readout at the upper right of the display (see Figure 4-9). The allowable deviation for each resolution bandwidth setting is shown in the table.

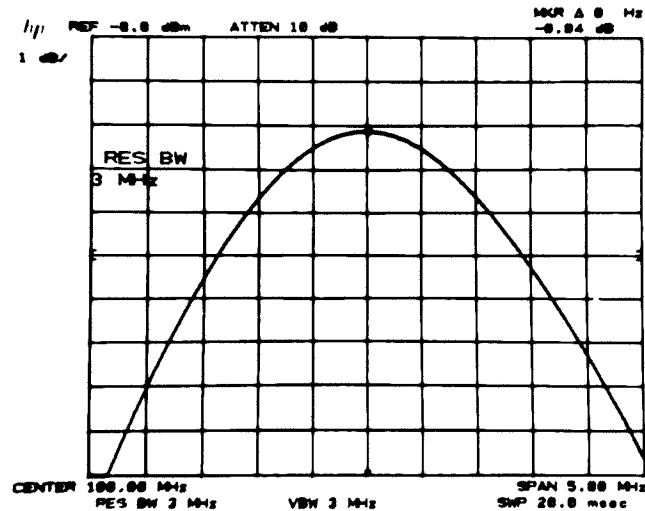


Figure 4-9. Bandwidth Switching Uncertainty Measurement

Table 4-7. Bandwidth Switching Uncertainty

RES BW	FREQUENCY SPAN	Deviation (MKR Δ Readout, dB)	Allowable Deviation (dB)
1 MHz	5 MHz	0 (ref.)	0 (ref.)
3 MHz	5 MHz	_____	± 1.0
300 kHz	5 MHz	_____	± 0.5
100 kHz	500 kHz	_____	± 0.5
30 kHz	500 kHz	_____	± 0.5
10 kHz	50 kHz	_____	± 0.5
3 kHz	50 kHz	_____	± 0.5
1 kHz	10 kHz	_____	± 0.5
300 Hz	1 kHz	_____	± 0.5
100 Hz	1 kHz	_____	± 0.5
30 Hz	200 Hz	_____	± 0.5
10 Hz	100 Hz	_____	± 1.0

4-22. LOG SCALE SWITCHING UNCERTAINTY TEST

RELATED ADJUSTMENT:

Video Processor Adjustments

SPECIFICATION:

± 0.5 dB (uncorrected)


DESCRIPTION:





The log scale is stepped from 1 dB/DIV to 10 dB/DIV and the variation in trace amplitude from the 1 dB/DIV setting at each step is measured.





EQUIPMENT:

None required

PROCEDURE:

1. Press  .
2. Key in analyzer settings as follows:

	.....	100 MHz
	.....	100 kHz
	.....	-8 dBm
	.....	30 kHz

3. Press LOG  and key in a log scale of 1 dB per division.
4. Connect CAL OUPUT to RF INPUT.
5. Press MARKER  . Record the marker amplitude (upper right of display) in Table 4-8.
6. Step up through the log scales with  . At each step, press MARKER  , then record the marker amplitude in Table 4-8. Refer to Figure 4-10.
7. Subtract the marker amplitude at the 1 dB/DIV setting from the marker amplitudes recorded for the 2, 5, and 10 dB/DIV settings to obtain the amplitude deviations. The deviation should be less than ± 0.5 dB for each log scale.

PERFORMANCE TESTS

4-22. LOG SCALE SWITCHING UNCERTAINTY TEST (Cont'd)

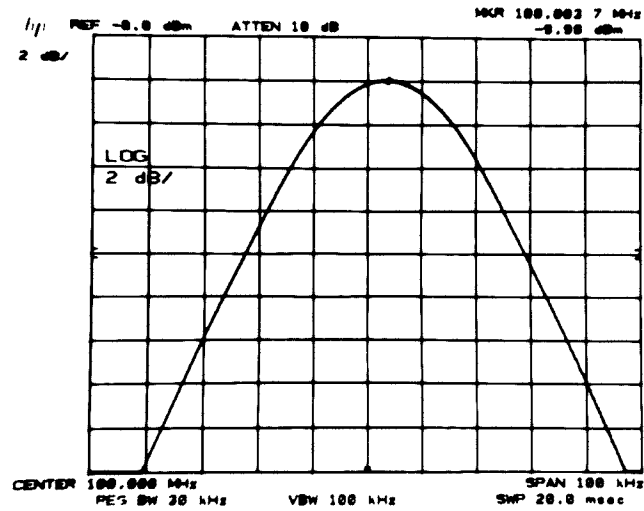


Figure 4-10. Log Scale Switching Uncertainty Measurement

Table 4-8. Log Scale Switching Uncertainty

SCALE (dB/DIV)	MKR Amplitude (dBm)	Deviation (dB)	Allowable Deviation (dB)
1	_____	0 (ref.)	0 (ref.)
2	_____	_____	±0.5
5	_____	_____	±0.5
10	_____	_____	±0.5

4-23. IF GAIN UNCERTAINTY TEST

RELATED ADJUSTMENTS:

Step Gain and 18.4 MHz Local Oscillator Adjustments

21.4 MHz Bandwidth Filter Adjustments

SPECIFICATION:

Assuming the internal calibration signal is used to calibrate the reference level at -10 dBm and the input attenuator is fixed at 10 dB, any changes in reference level from the -10 dB setting will contribute to IF gain uncertainty as shown:

range	uncertainty (uncorrected; 20—30°C)
0 dBm to -55.9 dBm	± 0.6 dB
-56.0 dBm to -129.9 dBm	± 1.0 dB

DESCRIPTION:

Two procedures are provided for testing the IF gain steps. The first tests the 10 dB and 2 dB steps by an RF substitution method, using step attenuators that have been calibrated by a standards laboratory. The 0.1 dB steps are checked in linear mode with the MARKER Δ function, using the analyzer's Analog-Digital Converter (A3A8) to measure the gain steps. An alternate procedure is provided for testing the 0.1 dB steps with an external reference, the attenuator of a 3330B Frequency Synthesizer.

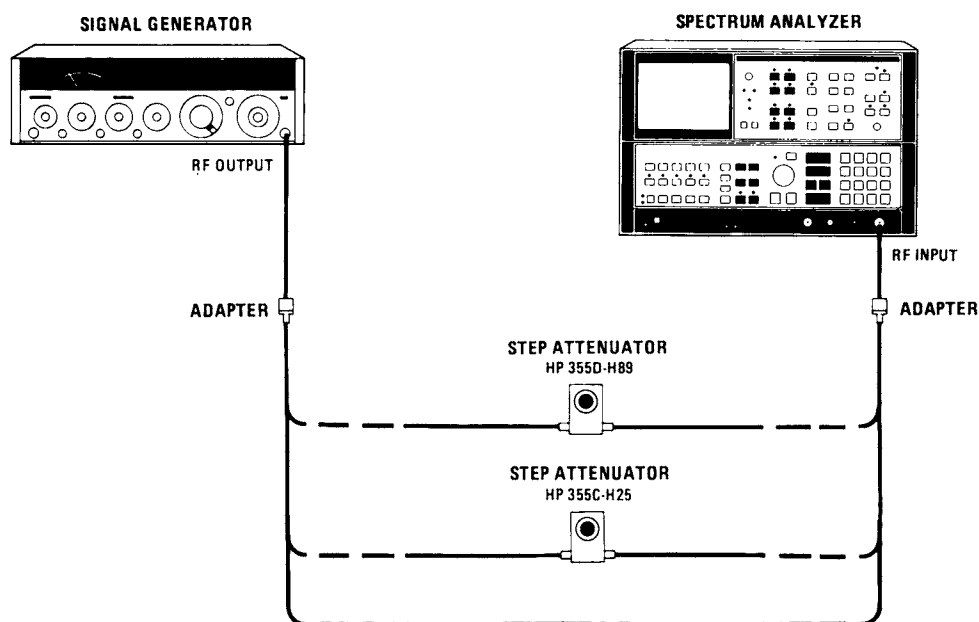


Figure 4-11. IF Gain Uncertainty Test Setup

4-23. IF GAIN UNCERTAINTY TEST (Cont'd)





NOTE

Equipment listed is for two test setups, Figures 4-11 and 4-13.

EQUIPMENT:



Signal Generator	HP 8640B
Step Attenuator	HP 355D-H89
Step Attenuator	HP 355C-H25
Frequency Synthesizer (optional)	HP 3330B
Adapter, Type N Male to BNC Female (2 required)	HP 1250-0780




PROCEDURE:



1. Press .
2. Connect CAL OUTPUT to RF INPUT.
3. Press  . Adjust AMPTD CAL for a MARKER amplitude of $-10.00 \text{ dBm} \pm 0.02 \text{ dB}$.
4. Press .

10 dB Gain Steps

5. Set the 8640B Signal Generator for an output frequency of $20.0010 \pm 0.0001 \text{ MHz}$ and an output level of 0 dBm. Press LOCK ON on the signal generator.
6. Connect the output of the signal generator to the analyzer input through the 10 dB step attenuator (HP 355D) as shown in Figure 4-11, with step attenuator set at 0 dB.
7. Key in analyzer settings as follows:

	.....	2 kHz
	.....	20.001 MHz

8. Press MARKER ,  or adjust  to center signal trace on display.
9. Set analyzer as follows:

	.....	100 Hz
	.....	1 kHz

10. Place peak of trace at the reference level (top) graticule line by adjusting the output level of the signal generator.

4-23. IF GAIN UNCERTAINTY TEST (Cont'd)

11. Press LOG and key in a log scale of 1 dB per division.
12. Using the OUTPUT LEVEL control of the signal generator, set the peak of the trace two divisions (2 dB) below the reference level line.
13. Press MARKER , .
14. Press , to permit extended reference level settings.
15. Set , step attenuator, and according to Table 4-9. At each setting, record the MKR Δ amplitude (deviation from the 0 dB reference setting) in the table (see Figure 4-12). Add the step attenuator error to find the corrected deviation.

NOTE

After measurement at the = -70 dBm setting, press , .

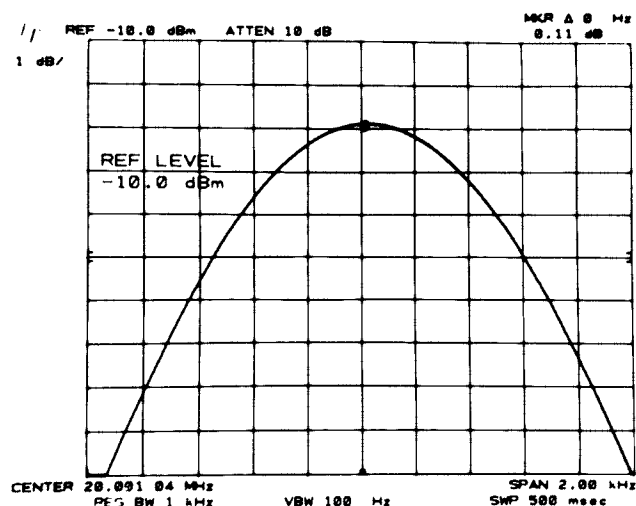


Figure 4-12. IF Gain Uncertainty Measurement

2 dB Gain Steps

16. Press , , .
17. Set to -1.9 dBm.
18. Press MARKER . Set to 100 Hz.
19. Substitute the 1 dB step attenuator (HP 355C) for the 10 dB step attenuator. Set the attenuator to 0 dB.
20. Adjust signal generator OUTPUT LEVEL to set peak of signal trace 2 divisions (2 dB) down from the reference level line.

PERFORMANCE TESTS

4-23. IF GAIN UNCERTAINTY TEST (Cont'd)

21. Press MARKER PEAK SEARCH, Δ.
22. Set REFERENCE LEVEL and step attenuator according to Table 4-10. At each setting, record the MKR Δ amplitude in the table. Add the step attenuator error to find the corrected deviation.

Table 4-9. IF Gain Uncertainty, 10 dB Steps

REFERENCE LEVEL (dBm)	Step Attenuator Setting (dB)	VIDEO BW (Hz)	Deviation (MARKER Δ amplitude) (dB)	Step Attenuator Error* (dB)	Corrected Deviation (dB)
0	0	100	0 (ref.)	0 (ref.)	0 (ref.)
- 10	10	100	_____	_____	_____
- 20	20	100	_____	_____	_____
- 30	30	100	_____	_____	_____
- 40	40	100	_____	_____	_____
- 50	50	100	_____	_____	_____
- 60	60	100	_____	_____	_____
- 70	70	10	_____	_____	_____
SHIFT ENTER DB/DIV - 80	30	100	_____	_____	_____
- 90	40	100	_____	_____	_____
-100	50	10	_____	_____	_____
-110	60	10	_____	_____	_____
-120	70	10	_____	_____	_____

*The error is positive if the calibration is > the dial setting, negative if the calibration is < the dial setting. For example, 9.99 dB calibration for a 10 dB attenuator setting represents an error of -0.01 dB.

Table 4-10. IF Gain Uncertainty, 2 dB Steps

REFERENCE LEVEL (dBm)	Step Attenuator Setting (dB)	Deviation (MARKER Δ amplitude) (dB)	Step Attenuator Error* (dB)	Corrected Deviation (dB)
-1.9	0	0 (ref.)	0 (ref.)	0 (ref.)
-3.9	2	_____	_____	_____
-5.9	4	_____	_____	_____
-7.9	6	_____	_____	_____
-9.9	8	_____	_____	_____

*The error is positive if the calibration is > the dial setting, negative if the calibration is < the dial setting. For example, 9.99 dB calibration for a 10 dB attenuator setting represents and error of -0.01 dB.

PERFORMANCE TESTS

4-23. IF GAIN UNCERTAINTY TEST (Cont'd)

0.1 dB Gain Steps

23. Disconnect step attenuator and connect signal generator output directly to the analyzer input.
24. Press MARKER .
25. Set to 0 dB.
26. Press SCALE LIN button. Press , (resolution bandwidth) to obtain amplitude readouts in dBm.
27. Adjust output level of signal generator to place the peak of the trace 3 divisions below the reference level line.
28. Press MARKER , .
29. Set according to Table 4-11. At each setting, record the MKR Δ amplitude in the table. Subtract the values in column 2 from those in column 1 to arrive at the amplitude deviation.

Table 4-11. IF Gain Uncertainty, 0.1 dB Steps

<input type="button" value="REFERENCE LEVEL"/> (dBm)	1 MARKER Δ Amplitude (dB)	2 Ideal MARKER Δ Amplitude (dB)	Deviation (1-2) (dB)
0.0	0.00 (ref.)	0.00 (ref.)	0.00 (ref.)
-0.1	_____	0.10	_____
-0.2	_____	0.20	_____
-0.3	_____	0.30	_____
-0.4	_____	0.40	_____
-0.5	_____	0.50	_____
-0.6	_____	0.60	_____
-0.7	_____	0.70	_____
-0.8	_____	0.80	_____
-0.9	_____	0.90	_____
-1.0	_____	1.00	_____
-1.1	_____	1.10	_____
-1.2	_____	1.20	_____
-1.3	_____	1.30	_____
-1.4	_____	1.40	_____
-1.5	_____	1.50	_____
-1.6	_____	1.60	_____
-1.7	_____	1.70	_____
-1.8	_____	1.80	_____
-1.9	_____	1.90	_____

PERFORMANCE TESTS

4-23. IF GAIN UNCERTAINTY TEST(Cont'd)

30. Check the last five entries in Table 4-9. There should be no corrected deviations greater than ± 0.4 dB.
31. Find the largest positive corrected deviation and the largest negative corrected deviation for reference level settings from 0 dBm to -70 dBm in Table 4-9. Also, find the largest positive and negative corrected deviations for the last five settings in the table.


Reference Level Range:	0 to -70 dBm	-80 to -120 dBm
Largest Positive Corrected Deviation:	_____ dB	_____ dB
Largest Negative Corrected Deviation:	_____ dB	_____ dB

32. Find the largest positive and negative corrected deviations in Table 4-10 and 4-11:

	Table 4-10	Table 4-11
Largest Positive Corrected Deviation:	_____ dB	_____ dB
Largest Negative Corrected Deviation:	_____ dB	_____ dB

33. The sum of the positive deviations recorded in steps 31 and 32 should not exceed 0.6 dB.
34. The sum of the negative deviations recorded in steps 31 and 32 should not be less than -0.6 dB.

0.1 dB Gain Steps (Alternate Procedure)

1. A 3330B Frequency Synthesizer may be used to test the 0.1 dB steps by the following procedure.
2. Press  on the analyzer.
3. Set frequency synthesizer for an output frequency of 10 MHz and an output level of -2.00 dBm.
4. Key in the following analyzer settings:

	.....	10 MHz
	.....	2 kHz
		1 kHz

5. Connect OUTPUT of synthesizer to RF INPUT of analyzer (see Figure 4-13).

PERFORMANCE TESTS

4-23. IF GAIN UNCERTAINTY TEST (Cont'd)

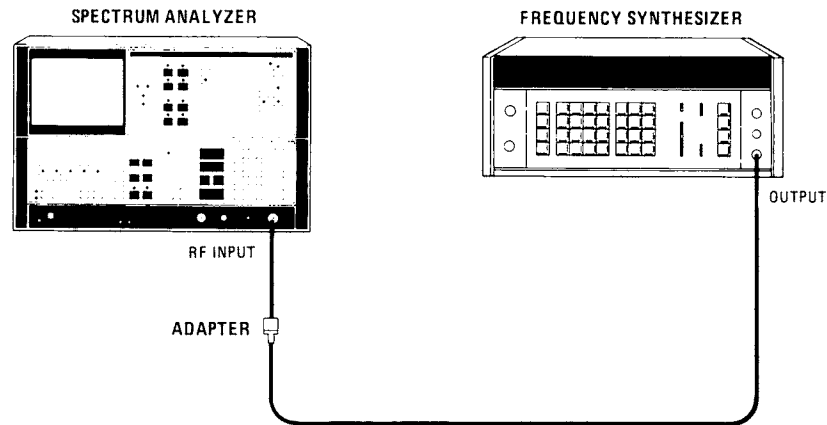


Figure 4-13. IF Gain Uncertainty Test Setup (Alternate Procedure)

6. Press LOG ENTER dB/DIV and key in a log scale of 1 dB per division.
7. Press MARKER PEAK SEARCH , Δ .
8. Set REFERENCE LEVEL and frequency synthesizer output amplitude according to Table 4-12. At each setting, record the MKR Δ amplitude in the table.

Table 4-12. IF Gain Uncertainty, 0.1 dB Steps (Alternate Procedure)

REFERENCE LEVEL (dBm)	Frequency Synthesizer Amplitude (dBm)	Deviation (MKR Δ amplitude) (dB)
0.0	-2.00	0 (ref.)
-0.1	-2.10	_____
-0.2	-2.20	_____
-0.3	-2.30	_____
-0.4	-2.40	_____
-0.5	-2.50	_____
-0.6	-2.60	_____
-0.7	-2.70	_____
-0.8	-2.80	_____
-0.9	-2.90	_____
-1.0	-3.00	_____
-1.1	-3.10	_____
-1.2	-3.20	_____
-1.3	-3.30	_____
-1.4	-3.40	_____
-1.5	-3.50	_____
-1.6	-3.60	_____
-1.7	-3.70	_____
-1.8	-3.80	_____
-1.9	-3.90	_____

9. Do steps 30 through 34, substituting "Table 4-12" for "Table 4-11".

4-24. SCALE FIDELITY TEST

RELATED ADJUSTMENT:

Log Amplifier Adjustments

SPECIFICATION:

Log:

Incremental

± 0.1 dB/dB over 0 to 80 dB display

Cumulative

$\leq \pm 1.0$ dB max over 0 to 80 dB display (20 — 30° C).

$\leq \pm 1.5$ dB max over 0 to 90 dB display

Linear:

$\pm 3\%$ of reference level

DESCRIPTION:

Scale fidelity in log and linear modes is tested by decreasing the signal level to the spectrum analyzer in 10 dB steps with a calibrated external attenuator and measuring the displayed amplitude change with the analyzer's MARKER Δ function.

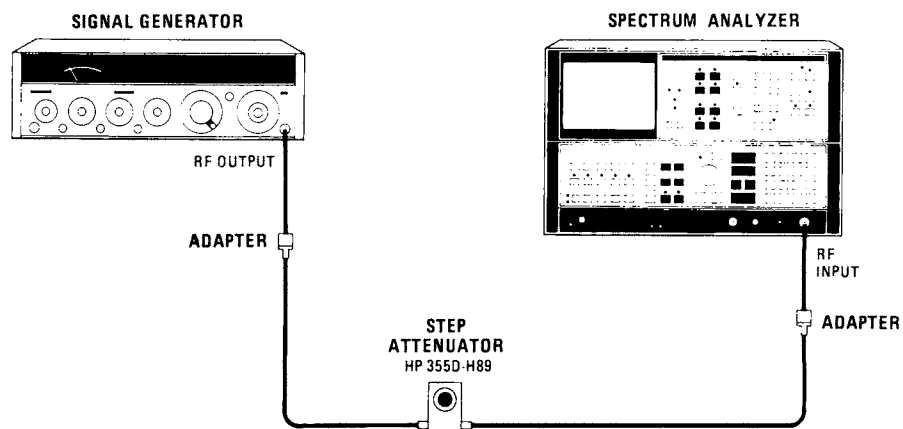


Figure 4-14. Scale Fidelity Test Setup

4-24. SCALE FIDELITY TEST (Cont'd)

EQUIPMENT:

Signal Generator HP 8640B
 Step Attenuator HP 355D-H89
 Adapter, Type N Male to BNC Female (2 required) HP 1250-0780

PROCEDURE:

Log Fidelity

1. Set signal generator for an unmodulated 20.000 ± 0.001 MHz output at a level of 0 dBm.

2. Connect equipment as shown in Figure 4-14 with step attenuator set at 0 dB.

3. Press **2-22 GHz** on the analyzer. Key in analyzer settings as follows:

CENTER FREQUENCY 20 MHz
FREQUENCY SPAN 50 kHz

4. Press **MARKER** **PEAK SEARCH** , **MR CF** , to center the signal on the display.

5. Key in the following analyzer settings:

FREQUENCY SPAN 0 Hz
VIDEO BW 100 Hz

6. Adjust the signal generator output level for a marker amplitude of .00 dBm. Change **VIDEO BW** to 1 Hz.

7. Press **MARKER** **Δ** . Step the step attenuator from 0 dB to 90 dB, recording the **MARKER Δ** amplitude (a negative value) at each step in column 2 of Table 4-13. Allow several sweeps after each step for the video filtered trace to reach its final amplitude (see Figure 4-15).

8. Record the attenuator calibration for each step attenuator setting in column 1 of Table 4-13.

9. Add the value in column 1 to the value in column 2 for each setting to find the fidelity error.

PERFORMANCE TESTS

4-24. SCALE FIDELITY TEST (Cont'd)

Table 4-13. Log Scale Fidelity

Step Attenuator Setting (dB)	1 Attenuator Calibration (dB)	2 MARKER Δ Amplitude (dB)	Fidelity Error (Column 2 + Column 1) (dB)
0	0 (ref.)	0 (ref.)	0 (ref.)
10	_____	_____	_____
20	_____	_____	_____
30	_____	_____	_____
40	_____	_____	_____
50	_____	_____	_____
60	_____	_____	_____
70	_____	_____	_____
80	_____	_____	_____
90	_____	_____	_____

10. The fidelity error at each attenuator setting from 10 dB to 80 dB should be $\leq \pm 1.0$ dB.

11. The fidelity error at the 90 dB setting should be $\leq \pm 1.5$ dB.

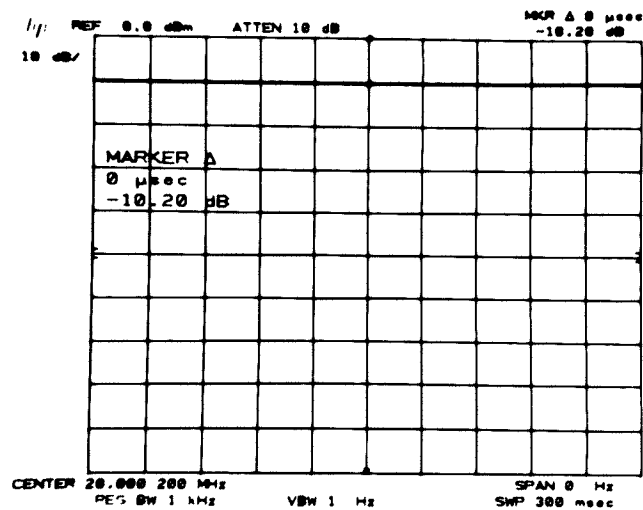


Figure 4-15. Scale Fidelity Measurement

4-24. SCALE FIDELITY TEST (Cont'd)

Linear Fidelity

12. Key in analyzer settings as follows:

VIDEO BW	300 Hz
FREQUENCY SPAN	1 MHz
RES BW	1 MHz

13. Set step attenuator to 0 dB.

14. Press SCALE LIN pushbutton. Set **FREQUENCY SPAN** to 0 Hz.

15. Press MARKER **NORMAL**. Adjust output level of generator for a MARKER amplitude of 224 mV (0 dBm).

16. Set **VIDEO BW** to 1 Hz. Press **SHIFT**, **AUTO** (resolution bandwidth), MARKER **Δ**.

17. Set step attenuator to 10 dB. Record the MARKER Δ amplitude in column 2 of Table 4-14.

18. Set step attenuator to 20 dB. Record the MARKER Δ amplitude in column 2 of Table 4-14.

19. Record the step attenuator calibrations corresponding to the 10 dB and 20 dB attenuator settings in column 1 of Table 4-14 (if the 10 dB step is calibrated at 10.1 dB, for example, enter +0.1 dB).

20. Add the values in column 1 to those in column 2 to find the corrected amplitude readings. The allowable ranges for the amplitude readings are shown in the table.

Table 4-14. Linear Scale Fidelity

Step Attenuator Setting (dB)	1 Attenuator Error* (dB)	2 MARKER Δ Amplitude (dB)	Corrected Amplitude (1 + 2) (dB)	Allowable Range ($\pm 3\%$ of Reference Level) (dB)	
				Min.	Max.
10	_____	_____	_____	-10.87	-9.21
20	_____	_____	_____	-23.10	-17.72
*The error is positive if the calibration is $>$ the dial setting, negative if the calibration is $<$ the dial setting. For example, 9.99 dB calibration for a 10 dB attenuator setting represents an error of -0.01 dB.					

4-25. CALIBRATOR AMPLITUDE ACCURACY TEST

RELATED ADJUSTMENT:

CAL OUTPUT Adjustment

SPECIFICATION:

± 0.3 dB

DESCRIPTION:

The output level of the calibrator signal is measured with a power meter.

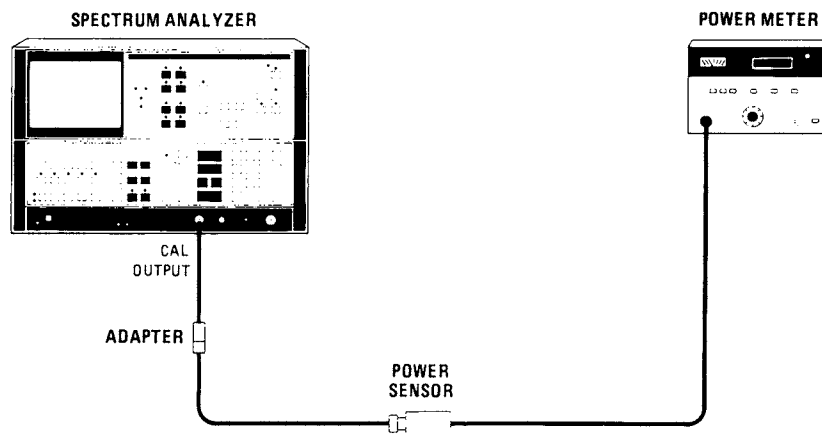


Figure 4-16. Calibrator Amplitude Accuracy Test Setup

EQUIPMENT:

Power Meter	HP 436A
Power Sensor	HP 8482A
Adapter, Type N Female to BNC Male	HP 1250-0077

PROCEDURE:

1. Connect equipment as shown in Figure 4-16.
2. Measure output level of the CAL OUTPUT signal. The value should be -10.0 dBm ± 0.3 dB.

4-26. FREQUENCY RESPONSE TEST

RELATED ADJUSTMENTS:

Frequency Response Adjustments

SPECIFICATIONS:

(Includes input attenuator flatness in the 10 dB setting and mixing mode gain variations, and assumes PRESELECTOR PEAK in current instrument state.)

Center Frequency

100 Hz to 2.5 GHz non-preselected band
 2 to 12.5 GHz preselected bands
 12.5 to 18.6 GHz preselected band
 18.6 to 20 GHz preselected band
 20 to 22 GHz preselected band

Flatness (20–30°C)

± 0.6 dB
 ± 1.7 dB
 ± 2.2 dB
 ± 2.2 dB
 ± 3.0 dB

DESCRIPTION:

Frequency response is checked across the full range of the spectrum analyzer. In the non-preselected range from 100 Hz to 2.5 GHz, three signal sources are used to make swept measurements: a function generator (100 Hz to 100 kHz), a frequency synthesizer (100 kHz to 10 MHz), and a sweep oscillator. In the preselected bands from 2 GHz to 22 GHz, a sweep oscillator is used to check the response at closely-spaced frequency points. From 100 Hz to 10 MHz, the source flatness permits a direct display of analyzer response. Above 10 MHz, the externally levelled source is first characterized with a power meter. The characterization data is subtracted from the displayed response to remove variations due to the source.

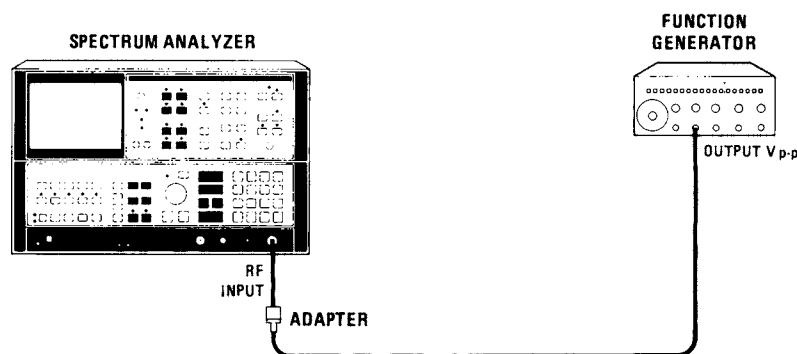


Figure 4-17. Frequency Response Test Setup (100 Hz to 100 kHz)

4-26. FREQUENCY RESPONSE TEST (Cont'd)

NOTE

Equipment listed is for five test setups, Figures 4-17, 4-19, 4-21, 4-23, and 4-25.

EQUIPMENT:

Sweep Oscillator	HP 8620C
RF Plug-In.	HP 86222A
RF Plug-In.	HP 86290B, Opt. H08
Frequency Synthesizer	HP 3330B
Function Generator.	HP 3312A
Power Meter	HP 432A
Power Meter	HP 436A
Power Sensor.	HP 8481A
Thermistor Mount.	HP K486A
Reactive Power Divider	Omni-Spectra 2090-6202-00
Detector	HP 33330C
61 cm (24 in.) Cable Assembly SMA Male Connectors	B&W 55-S142-55-24
20 dB Attenuator	HP 8491A, Opt. 020
Adapter, Waveguide to SMA Female, Right Angle Launch	Maury K210C
Adapter, Type N Female to SMA Female	HP 86290-60005
Adapter, Type N Male to SMA Female (2 required)	HP 1250-1250
Adapter, Type N Female to Type N Female	HP 1250-1472
Adapter, Type N Male to BNC Female	HP 1250-0780
Adapter, SMC Female to BNC Female	HP 1250-0832
Adapter, SMC Male to SMC Female, Right Angle	Sealelectro 50-078-0000
Adapter, SMA Male to SMA Male	HP 1250-1159



PROCEDURE:

100 Hz to 100 kHz


1. Connect CAL OUTPUT to the RF INPUT on the spectrum analyzer.
2. Press 2-22 GHz, RECALL, 8, MARKER PEAK SEARCH and adjust AMPTD CAL for a MARKER amplitude of $-10.00 \text{ dBm} \pm 0.02 \text{ dB}$.
3. Press 2-22 GHz on the spectrum analyzer. Connect function generator to analyzer RF INPUT as shown in Figure 4-17.




4-26. FREQUENCY RESPONSE TEST (Cont'd)

4. Key in analyzer settings as follows:

	..... 1 kHz
	..... 100 kHz

5. Set function generator controls as follows:

RANGE Hz	10K
FUNCTION.....	
OFFSET.....	CAL
AMPLITUDE	1V
AMPLITUDE VERNIER	midrange
SYM.....	CAL
TRIGGER PHASE	FREE RUN
MODULATION	all out
MODULATION RANGE Hz.....	1
MODULATION RANGE Hz VERNIER.....	10 o'clock
MODULATION SYM	CAL
Percent Modulation	fully cw

6. Adjust function generator FREQUENCY to place generator signal near the center graticule on the analyzer display.
7. Adjust the AMPLITUDE VERNIER on the function generator until the peak of the generator signal is at the reference level line on the analyzer display.
8. Press LOG  on the analyzer and key in 1 dB per division.
9. Adjust function generator AMPLITUDE VERNIER to place peak of generator signal 2 dB (2 divisions) down from the reference level. Do not readjust AMPLITUDE VERNIER during test.
10. Adjust FREQUENCY on the function generator to position the signal trace at the right edge of the analyzer display.
11. Press TRACE A  . Press MODULATION SWP on the function generator. When function generator completes one sweep, press TRACE A  . Trace should appear as in Figure 4-18.

4-26. FREQUENCY RESPONSE TEST (Cont'd)

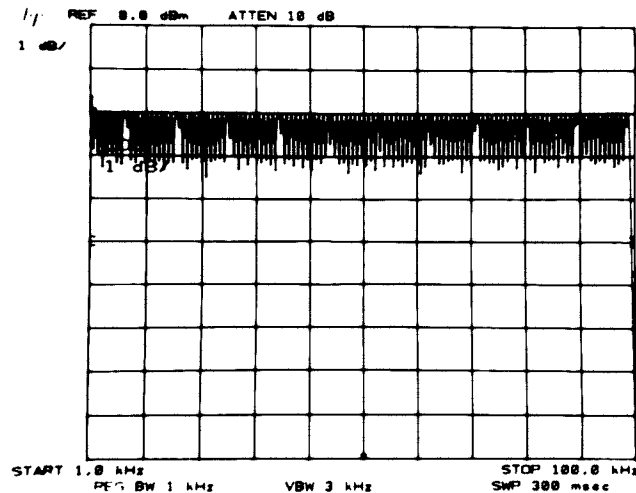


Figure 4-18. Frequency Response Measurement (1 kHz to 100 kHz)

12. The closely spaced series of signal peaks on the display defines the analyzer response over this frequency range. The maximum and minimum peak amplitudes should not differ by more than 1.2 dB. The MARKER Δ function may be used to measure this amplitude difference.
13. Press **2-22 GHz** on the analyzer. Key in the following settings:

CENTER FREQUENCY	.....	100 Hz
FREQUENCY SPAN	.....	100 Hz

14. Press LOG **ENTER dB/DIV** and key in 1 dB.
15. Set function generator controls as follows:

RANGE Hz	.....	100
FREQUENCY	.....	1
MODULATION	.....	all out

16. Adjust function generator FREQUENCY to center signal on analyzer display.
17. Press MARKER **PEAK SEARCH**. The MKR amplitude should be $-2.00 \text{ dBm} \pm 0.6 \text{ dB}$.
18. Set **CF STEP SIZE** to 100 Hz. Step analyzer **CENTER FREQUENCY** from 100 Hz to 1 kHz with **↑** and set function generator FREQUENCY to center signal on display at each step. Press MARKER **PEAK SEARCH** at each frequency. The MKR amplitude should be $-2 \text{ dBm} \pm 0.6 \text{ dB}$.

4-26. FREQUENCY RESPONSE TEST (Cont'd)

100 kHz to 10 MHz

19. Set the controls of the frequency synthesizer as follows:

FREQ	5 MHz
FREQ STEP	10 kHz
AMPL	-2 dBm
LEVELING.....	SLOW
TIME/STEP	100 msec
STEPS	1000
SWEEP.....	FREQ/UP

20. Connect equipment as shown in Figure 4-19.

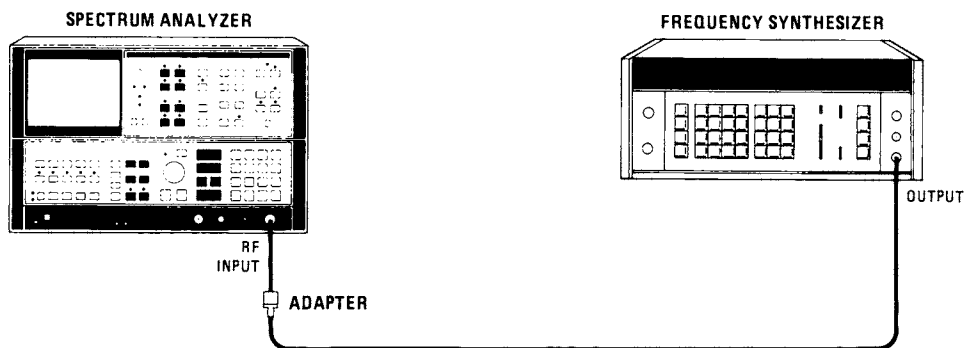


Figure 4-19. Frequency Response Test Setup (100 kHz to 10 MHz)

21. Press **2-22 GHz** on the analyzer. Key in the following settings:

START FREQ	100 kHz
STOP FREQ	10 MHz
RES BW	30 kHz

22. Press **LOG** **ENTER dB/DIV** and reduce scale to 1 dB per division.

4-26. FREQUENCY RESPONSE TEST (Cont'd)

23. Press **FREQ** on synthesizer. Adjust REFERENCE
LEVEL on analyzer to place peak of 5 MHz signal 2 divisions below the reference level line.
24. Press **FIRST POINT** on the synthesizer. Activate **TRACE A** MAX
HOLD on the analyzer.
25. Press **START SINGLE** on the synthesizer and wait for completion of the sweep. The peak-to-peak variation of the trace should be less than 1.2 dB (refer to Figure 4-20). Measure the peak-to-peak amplitude with the **MARKER Δ** function if the response appears marginal.

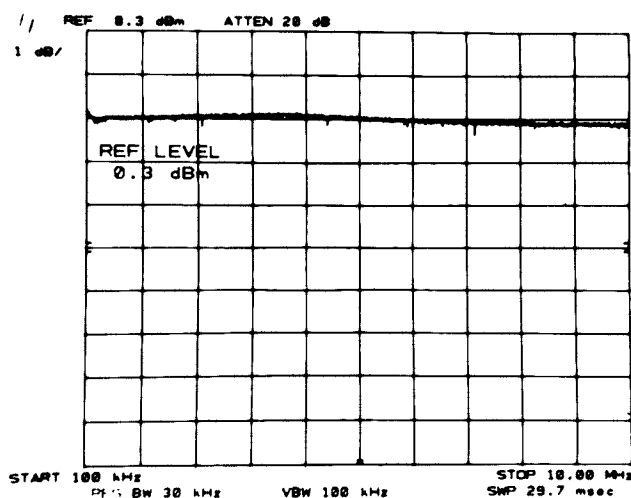


Figure 4-20. Frequency Response Measurement (100 kHz to 10 MHz)

4-26. FREQUENCY RESPONSE TEST (Cont'd)

10 MHz to 2.5 GHz

26. Set sweep oscillator for a 1 GHz (CW) output with RF Plug-In set to INT leveling.
27. Connect the power sensor to the RF OUTPUT of the RF Plug-In through the 20 dB attenuator and cable as shown in Figure 4-21.

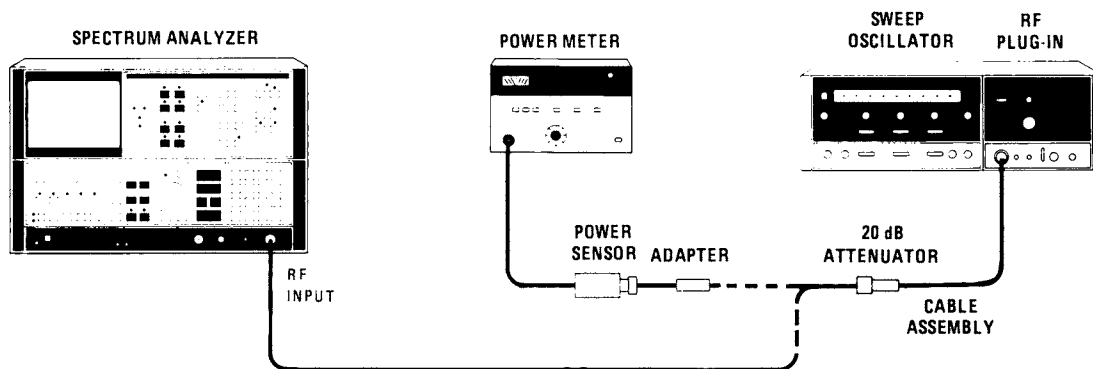


Figure 4-21. Frequency Response Test Setup (10 MHz to 2.4 GHz)

28. Adjust POWER LEVEL on the RF Plug-In for a power meter indication of $-15.00 \text{ dBm} \pm 0.10 \text{ dB}$.
29. Set sweep oscillator CW pointer to the frequencies listed in Table 4-15 and record the power meter indication at each frequency.
30. Press $\boxed{2-22 \text{ GHz}}$ on the analyzer.

NOTE

Care should be taken to disturb the cable assembly as little as possible, as flexing of the cable may cause a change in the measured power level. The power sensor or thermistor mount should be placed near the analyzer input to minimize flexing.

31. Disconnect the power sensor and N-to-N adapter from the 20 dB attenuator and connect attenuator directly to the analyzer input (see Figure 4-21). Be careful not to flex the cable assembly more than necessary.

PERFORMANCE TESTS

4-26. FREQUENCY RESPONSE TEST (Cont'd)

32. Key in analyzer settings as follows:

START FREQ	.....	10 MHz
STOP FREQ	.....	2.5 GHz
REFERENCE LEVEL	.....	-10 dBm
ENTER dB/DIV	.....	2 dB

33. Set the sweep oscillator SWEEP controls as follows:

MODE AUTO
 TRIGGER..... INT
 TIME 10 - 1 SECONDS
 TIME Vernier..... fully ccw

34. Adjust analyzer REFERENCE LEVEL, if necessary, to place peak of sweep oscillator signal near mid-screen. Press the FULL SWEEP button on the sweep oscillator and TRACE A MAX HOLD on the analyzer. Wait about two minutes for the trace to fill in as in Figure 4-22.

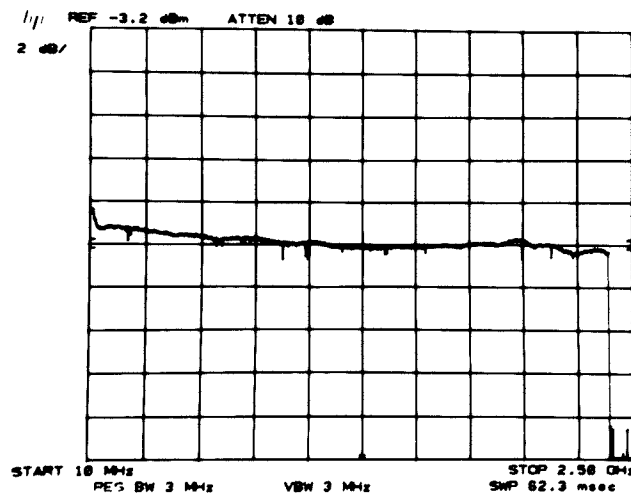


Figure 4-22. Frequency Response Measurement (10MHz to 2.4 GHz)

PERFORMANCE TESTS

4-26. FREQUENCY RESPONSE TEST (Cont'd)

35. Press MARKER ☐ NORMAL . Position the marker at each frequency in Table 4-15 and record the MARKER amplitude in the table.
36. Subtract the power meter reading from the MARKER amplitude at each frequency and record the results in column 3 of Table 4-15. The difference between the maximum and minimum corrected amplitude should be ≤ 1.2 dB.

Table 4-15. Frequency Response, 10 MHz to 2.5 GHz

Frequency (MHz)	1 Power Meter Reading (dBm)	2 MARKER Amplitude (dBm)	3 Corrected Amplitude (2-1) (dBm)
10	_____	_____	_____
50	_____	_____	_____
100	_____	_____	_____
200	_____	_____	_____
300	_____	_____	_____
400	_____	_____	_____
500	_____	_____	_____
600	_____	_____	_____
700	_____	_____	_____
800	_____	_____	_____
900	_____	_____	_____
1000	_____	_____	_____
1100	_____	_____	_____
1200	_____	_____	_____
1300	_____	_____	_____
1400	_____	_____	_____
1500	_____	_____	_____
1600	_____	_____	_____
1700	_____	_____	_____
1800	_____	_____	_____
1900	_____	_____	_____
2000	_____	_____	_____
2100	_____	_____	_____
2200	_____	_____	_____
2300	_____	_____	_____
2400	_____	_____	_____

4-26. FREQUENCY RESPONSE TEST (Cont'd)

2 GHz to 18 GHz (Preselected Range)

37. Disconnect test setup of Figure 4-21.
38. Substitute 86290B-H08 RF Plug-In for the 86222A. Set sweep oscillator to the 2.0 — 6.2 GHz band.
39. Set sweep oscillator to 2.0 GHz (CW). Set RF Plug-In controls as follows:

RF..... OFF
 ALC..... EXT
 ALC GAIN..... fully clockwise
 POWER LEVEL..... fully counterclockwise

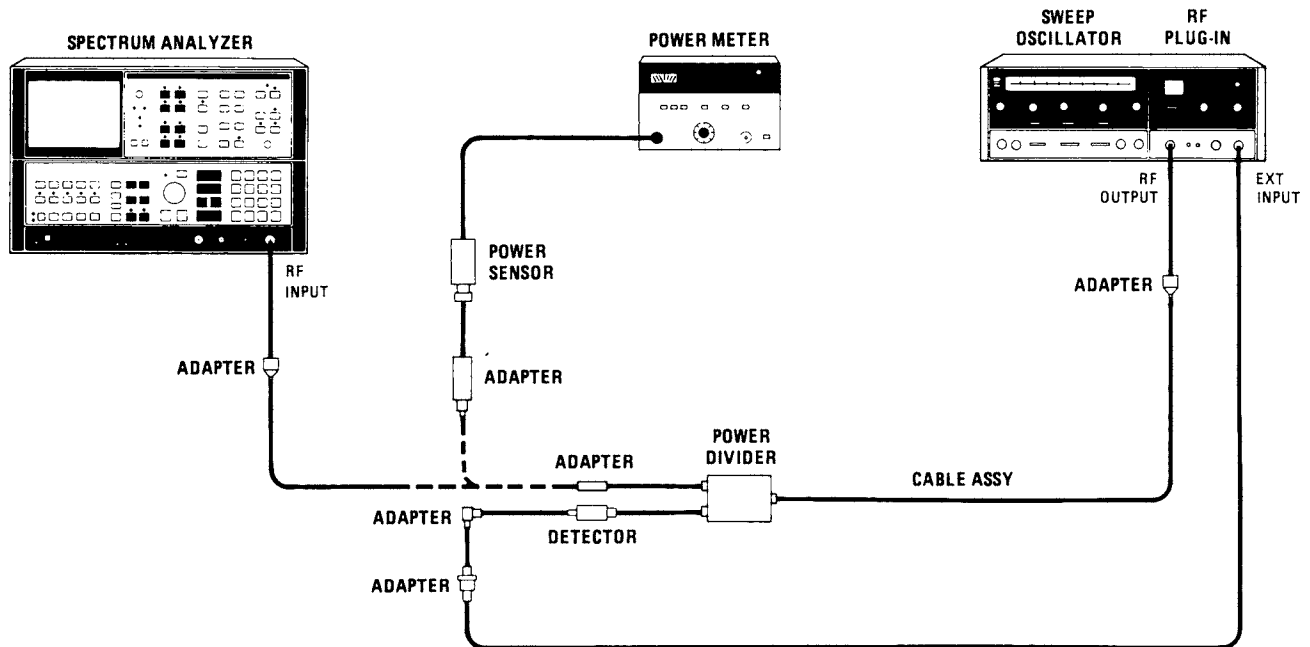


Figure 4-23. Frequency Response Test Setup (2 to 18 GHz)

4-26. FREQUENCY RESPONSE TEST (Cont'd)

40. Calibrate HP 436A Power Meter and HP 8481A Power Sensor. Connect equipment as shown in Figure 4-23, with power sensor connected through adapter to one output of the power divider.
41. Place RF switch on RF Plug-In in the ON position. Adjust POWER LEVEL for a power meter indication of $-12.00 \text{ dBm} \pm 0.05 \text{ dB}$.
42. Tune the sweep oscillator CW pointer from 2.0 to 2.45 GHz in 50 MHz increments. Adjust power meter CAL FACTOR % as required. Do not change the POWER LEVEL setting. Record the meter readings in Table 4-16.
43. Press 2-22
GHz, 0-2.5
GHz on the analyzer. Key in:

CENTER FREQUENCY	.....	2 GHz
CF STEP SIZE	.....	50 MHz
FREQUENCY SPAN	.....	100 MHz
REFERENCE LEVEL	.....	-10 dBm

44. Set CW pointer on sweep oscillator to 2.0 GHz.

NOTE

Care should be taken to disturb the cable assembly as little as possible during the test, since flexing of the cable may cause a change in the measured power level.

45. Disconnect power sensor from power divider and connect divider output to the analyzer input as shown in Figure 4-23. No cables should be used between divider and analyzer.
46. Press MARKER PEAK
SEARCH, MKR
CF or adjust CENTER
FREQUENCY to center signal trace on analyzer display.
47. Press LOG ENTER
dB/DIV and key in 2 dB. Change RES
BW to 3 MHz.
48. Adjust REFERENCE
LEVEL to place peak of signal trace 3 divisions down from the reference level line.
49. Press MARKER PEAK
SEARCH and record the MKR amplitude in Table 4-16.
50. Set sweep oscillator CW pointer and analyzer CENTER
FREQUENCY from 2.0 to 2.45 GHz in 50 MHz increments. Press MARKER PEAK
SEARCH at each frequency and record the MKR amplitude in Table 4-16. Adjust CENTER
FREQUENCY, not sweep oscillator CW control, to center signal on display.

PERFORMANCE TESTS

4-26. FREQUENCY RESPONSE TEST (Cont'd)

Table 4-16. Frequency Response, 2.0 to 2.45 GHz

Frequency (GHz)	1 Power Meter Reading (dBm)	2 MARKER Amplitude (dBm)	3 Corrected Amplitude (2-1) (dBm)
2.0	_____	_____	_____
2.05	_____	_____	_____
2.10	_____	_____	_____
2.15	_____	_____	_____
2.20	_____	_____	_____
2.25	_____	_____	_____
2.30	_____	_____	_____
2.35	_____	_____	_____
2.40	_____	_____	_____
2.45	_____	_____	_____

51. Subtract the power meter readings in column 1 of Table 4-16 from the MKR amplitudes in column 2 and record the results in the last column. Find the mean (average of maximum and minimum values) of the values in the last column and record: _____ dB.
52. Switch to the 2 – 22 GHz band on sweep oscillator.
53. Connect power sensor to power divider as in Figure 4-23. Set sweep oscillator from 2.6 GHz to 18 GHz in 200 MHz increments and plot the power meter readings or record them in a table (if plotting the values, label the frequency axis up to 22 GHz). Make changes in the CAL FACTOR % setting as required.
54. Flexing the cable as little as possible, connect the power divider to the analyzer input.
55. Set sweep oscillator CW pointer and analyzer CENTER
FREQUENCY to 2.6 GHz.
56. Key in a CF STEP
SIZE of 200 MHz.
57. Adjust CENTER
FREQUENCY to center the signal trace. Press MARKER PEAK
SEARCH , PRESEL
PEAK . When PEAKING! message disappears from display, record the MKR amplitude on the graph or table used for step 53. See Figure 4-24.

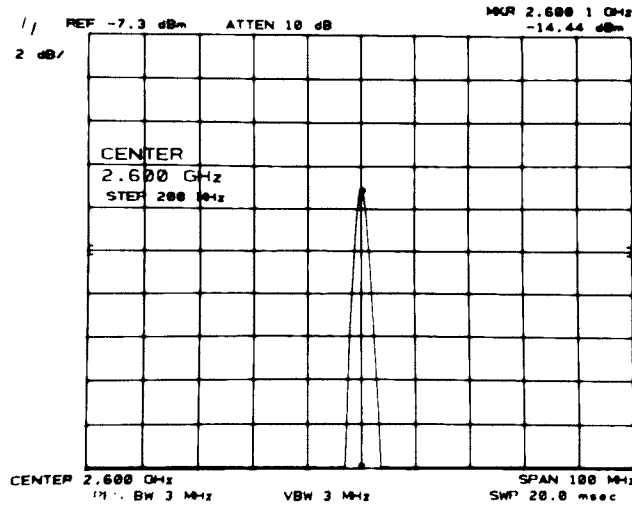


Figure 4-24. Frequency Response Measurement (2 to 22 GHz)

58. Set sweep oscillator CW pointer and analyzer CENTER
FREQUENCY from 2.6 GHz to 18 GHz in 200 MHz increments. At each frequency, follow the procedure of step 57.
59. Subtract the power meter amplitudes recorded in step 53 from the MKR amplitudes recorded in step 57 to find the frequency response from 2.6 GHz to 18 GHz corrected for source flatness. Subtract from this response the mean value calculated in step 51. This yields a response for the 2.6 GHz to 18.6 GHz range referenced to the response of the 0 to 2.5 GHz non-preselected range. The resultant values or response plot must be $\leq \pm 1.7$ dB from 2.6 GHz to 12.5 GHz and $\leq \pm 2.2$ dB from 12.5 GHz to 18 GHz.

18 GHz to 22 GHz (Preselected Range)

60. Connect output of power divider to thermistor mount as shown in Figure 4-25.

4-26. FREQUENCY RESPONSE TEST (Cont'd)

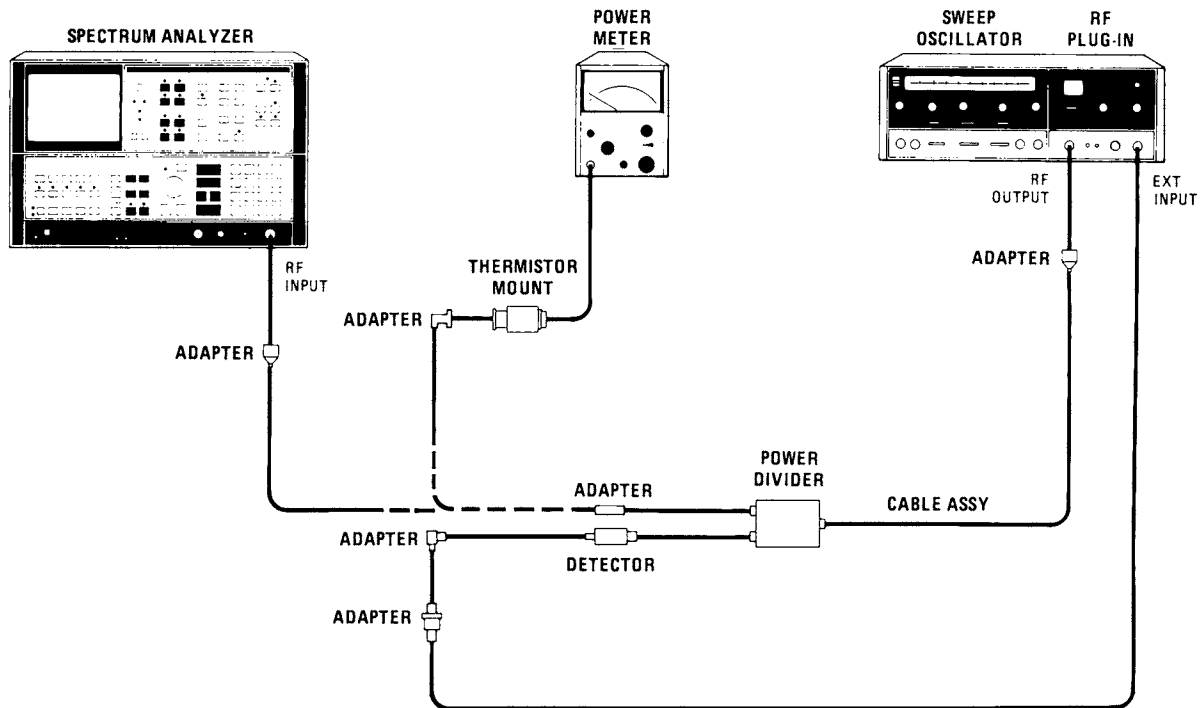


Figure 4-25. Frequency Response Test Setup (18 to 22 GHz)

61. Set sweep oscillator CW pointer to 18.0 GHz and adjust POWER LEVEL on RF Plug-In for a power meter indication of -12 dBm.
62. Set CW pointer from 18.0 GHz to 22.0 GHz in 200 MHz increments and record the meter readings on the graph or table generated for the 2.6 GHz to 18.0 GHz measurements.
63. Flexing the cable assembly as little as possible, connect the power divider to the analyzer input as indicated in Figure 4-25.
64. Set sweep oscillator CW pointer and analyzer CENTER
FREQUENCY to 18.0 GHz.
65. Adjust CENTER
FREQUENCY to center the signal trace. Press MARKER PEAK
SEARCH, PRESEL
PEAK. When PEAKING! message disappears from the display, record the MKR amplitude on the graph or table.
66. Set sweep oscillator CW pointer and analyzer CENTER
FREQUENCY from 18.0 GHz to 22.0 GHz in 200 MHz increments. At each frequency, follow the procedure of step 65.
67. Subtract the power meter readings from the MKR amplitudes to find the frequency response from 18.0 to 22.0 GHz corrected for source flatness. Subtract from this response the mean value calculated in step 51. The resultant response plot or tabulated values must be $\leq \pm 2.2$ dB for 18 to 20 GHz and $\leq \pm 3.0$ dB for 20 to 22 GHz.

4-27. SWEEP TIME ACCURACY TEST

RELATED ADJUSTMENT:

Sweep, DAC, and Main Coil Driver Adjustment

SPECIFICATION:

For sweep times ≤ 200 seconds, $\pm 10\%$.

For sweep times > 200 seconds, $\pm 30\%$.

DESCRIPTION:

NOTE

If a Time Mark Generator is not available, Paragraph 4-28 details an alternate procedure for checking sweep time accuracy.

A time mark generator is used to modulate a 500 MHz signal which is applied to the input of the spectrum analyzer. The signal is demodulated in the zero span mode to display the time mark pulses. Sweep time accuracy is tested by checking the spacing of the pulses on the display for various sweep times.

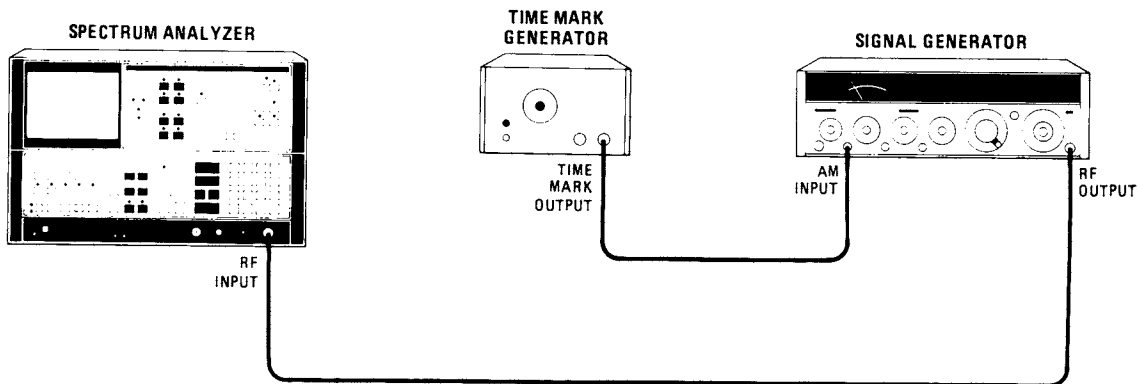


Figure 4-26. Sweep Time Accuracy Test Setup

EQUIPMENT:

Time Mark Generator	HP 226A
Signal Generator	HP 8640B

PROCEDURE:

1. Connect equipment as shown in Figure 4-26. AM switch on 8640B should be in OFF position.
2. Press **2-22 GHz** on the analyzer.
3. Key in the following settings:

CENTER FREQUENCY	500 MHz
FREQUENCY SPAN	100 kHz

4-27. SWEEP TIME ACCURACY TEST (Cont'd)

4. Set signal generator for an output frequency of 500.000 ± 0.005 MHz at an output level of -10 dBm. Press LOCK ON.
5. Press MARKER , , .
6. Set to 0 Hz, to 30 kHz, and press TRIGGER .
7. Put 8640B AM switch in the PULSE position.
8. Set TIME MARK SELECT on the time mark generator to 2 msec.
9. Set analyzer to 20 msec. Adjust TRIGGER LEVEL so that analyzer is sweeping and trace is stationary (see Figure 4-27).
10. Press SWEEP .
11. Press MARKER and place the marker on the first time mark pulse from the left edge of the graticule.
12. Press MARKER and position the movable marker on the ninth time mark pulse from the left edge of the graticule. Read the time span from the MARKER Δ readout (see Figure 4-27). This time should be between 14.40 msec and 17.60 msec.

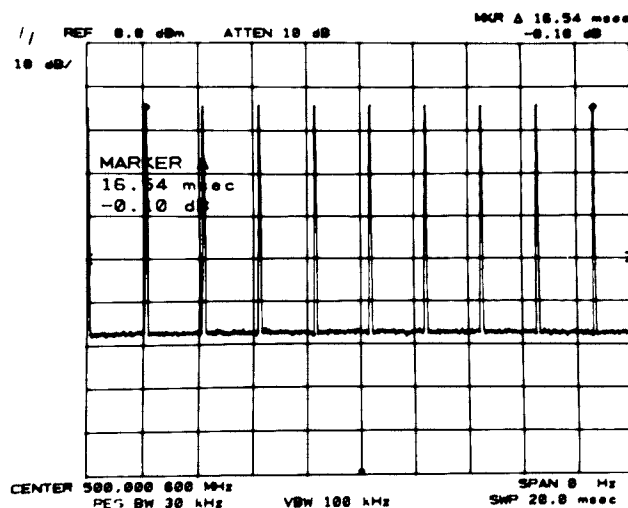


Figure 4-27. Sweep Time Measurement

13. Do steps 10 through 12 for each analyzer and time mark generator setting in Table 4-17. Position the markers on the comb lines indicated in the table. The MKR Δ time at each setting should be within the limits shown.

PERFORMANCE TESTS

4-27. SWEEP TIME ACCURACY TEST (Cont'd)

Table 4-17. Sweep Time Accuracy, Sweep Times ≥ 20 msec

SWEEP TIME	TIME MARK SELECT	Comb Lines	MARKER Δ Time		
			Min.	Measured	Max.
20 msec	2 msec	1st and 9th	14.40 msec	_____	17.60 msec
30 msec	5 msec	1st and 5th	18.00 msec	_____	22.00 msec
50 msec	5 msec	1st and 9th	36.00 msec	_____	44.00 msec
70 msec	10 msec	1st and 6th	45.00 msec	_____	55.00 msec
90 msec	10 msec	1st and 8th	63.00 msec	_____	77.00 msec
110 msec	10 msec	1st and 9th	72.00 msec	_____	88.00 msec
170 msec	20 msec	1st and 7th	108.0 msec	_____	132.0 msec
200 msec	20 msec	1st and 9th	144.0 msec	_____	176.0 msec
2 sec	0.2 sec	1st and 9th	1.440 sec	_____	1.760 sec
20 sec	2 sec	1st and 9th	14.40 sec	_____	17.60 sec
200 sec	10 sec	1st and 8th	153.0 sec	_____	187.0 sec

14. Set **SWEEP TIME** to 5 msec and **TIME MARK SELECT** to 0.5 msec.

15. Key in the following settings:

VIDEO BW 3 MHz
RES BW 3 MHz

16. Adjust **TRIGGER LEVEL** for a stationary trace with the first time mark pulse at the left edge of the graticule. The sixth pulse should be within ± 0.5 division of the center graticule line.

17. Following the sweep time and time mark settings in Table 4-18, check sweep time accuracy by the procedure of step 16.

Table 4-18. Sweep Time Accuracy, Sweep Times < 20 msec

SWEEP TIME	TIME MARK SELECT
2 msec	0.2 msec
1 msec	0.1 msec
200 μ sec	20 μ sec
100 μ sec	10 μ sec

PERFORMANCE TESTS

4-28. SWEEP TIME ACCURACY TEST (Alternate Procedure)

NOTE

This procedure should be used only if a Time Mark Generator is not available. If a Time Mark Generator is available, Paragraph 4-27 should be used. This procedure checks only those sweep times between 100usec and 10sec. For a complete check of all sweep times, a Time Mark Generator must be used as specified in Paragraph 4-27.

RELATED ADJUSTMENT:

Sweep, DAC, and Main Coil Driver Adjustments

SPECIFICATION:

$\pm 10\%$ for sweep times ≤ 200 seconds

$\pm 30\%$ for sweep times > 200 seconds

DESCRIPTION:

The triangular wave output of a function generator is used to modulate a 500 kHz signal applied to the input of the spectrum analyzer. This signal is demodulated in the analyzer's zero span mode to display the triangular waveform. The peaks of the triangular waveform for a given frequency are aligned with the graticule lines on the analyzer display and the sweep time read directly from the period averaging readout of a universal counter.

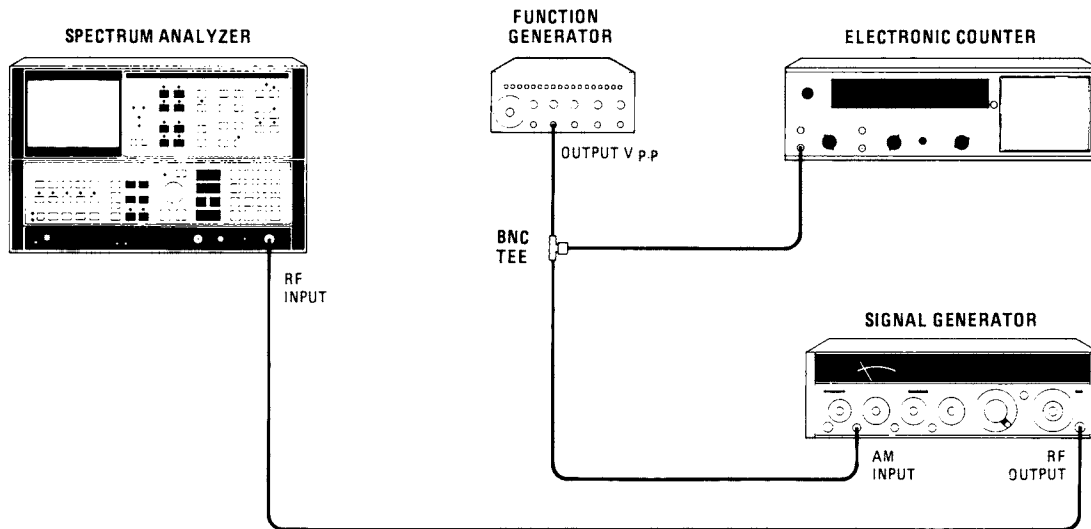


Figure 4-28. Sweep Time Accuracy Test Setup (Alternate Procedure)

EQUIPMENT:

Function Generator	HP 3312A
Electronic Counter	HP 5245L
Signal Generator	HP 8640B

PERFORMANCE TESTS

4-28. SWEEP TIME ACCURACY TEST (Alternate Procedure)(Cont'd)

PROCEDURE:

1. Connect equipment as shown in Figure 4-28. Signal Generator AM switch should be in the OFF position.
2. Press **2-22 GHz** on the spectrum analyzer.
3. Set **CENTER FREQUENCY** to 500 MHz and **FREQUENCY SPAN** to 100 kHz.
4. Set signal generator for an output frequency of 500 MHz and an output level of -10 dB.
5. Press **MARKER** **PEAK SEARCH**, **MR → CF**, **OFF**.
6. Set function generator controls as follows:

FREQUENCY Approximately 100 Hz
 FUNCTION Approximately 1V p-p
 OFFSET CAL position(IN)
 SYM CAL position(IN)
 TRIGGER PHASE FREE RUN
 MODULATION All buttons OUT

7. Key in the following analyzer settings:

FREQUENCY SPAN 0 Hz
RES BW 3 MHz
VIDEO BW 3 MHz
LOG **ENTER dB/DIV** 2 dB

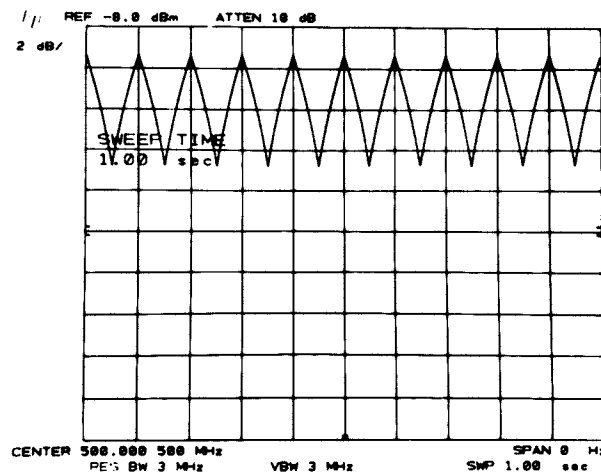


Figure 4-29. Sweep Time Measurement (Alternate Procedure)

PERFORMANCE TESTS

4-28. SWEEP TIME ACCURACY TEST (Alternate Procedure)(Cont'd)

8. Place signal generator AM switch in the DC position and adjust AM level for a peak-to-peak signal amplitude between two and three divisions. Refer to Figure 4-29. Adjust **REFERENCE LEVEL** for convenient viewing. Be sure signal generator FM switch is OFF.
9. Press TRIGGER **VIDEO** and adjust LEVEL for triggered sweep.
10. Set **SWEEP TIME** to 100 usec and set function generator frequency to 100 kHz on the dial.
11. Adjust analyzer TRIGGER LEVEL and function generator frequency to place a peak of the triangular waveform on the first graticule from the left edge of the CRT display.
12. Adjust function generator frequency to place a peak of the triangular waveform on each of the graticule lines of the analyzer CRT display while keeping the first peak aligned with the first graticule line using the analyzer TRIGGER LEVEL control.
13. Set the counter controls for period averaging time measurement.
14. With peaks aligned on graticule lines, multiply indication on counter by 10 to obtain full ten-division sweep time. Tolerance for sweep time is listed in Table 4-19.
15. Repeat steps 10 through 14 for each of the **SWEEP TIME** settings of Table 4-19 substituting the **SWEEP TIME** and function generator frequency settings listed in the table. Tolerances for each sweep time measurement are listed in the table.

Table 4-19. Sweep Time Accuracy (Alternate Procedure)

SWEEP TIME	Function Generator Frequency	Counter Indication X10	Tolerance	
			Max	Min
100 μ sec	100 kHz	_____	90 μ sec	110 μ sec
200 μ sec	50 kHz	_____	180 μ sec	220 μ sec
1 msec	10 kHz	_____	900 μ sec	1.1 msec
2 msec	5 kHz	_____	1.8 msec	2.2 msec
5 msec	2 kHz	_____	4.5 msec	5.5 msec
10 msec	1 kHz	_____	9 msec	11 msec
20 msec	500 Hz	_____	18 msec	22 msec
50 msec	200 Hz	_____	45 msec	55 msec
100 msec	100 Hz	_____	90 msec	110 msec
500 msec	20 Hz	_____	450 msec	550 msec
1 sec	10 Hz	_____	900 msec	1.1 sec
2 sec	5 Hz	_____	1.8 sec	2.2 sec
5 sec	2 Hz	_____	4.5 sec	5.5 sec
10 sec	1 Hz	_____	9 sec	11 sec

4-29. NOISE SIDEBANDS TEST

RELATED ADJUSTMENTS:

100 MHz Voltage-Controlled Crystal Oscillator Adjustments
 Sweep, DAC, and Main Coil Driver Adjustments
 M/N Loop Adjustments
 RF Module Phase Lock Adjustments
 YTO Loop Adjustments
 20/30 Phase Lock Adjustments

SPECIFICATION:

For center frequencies from 100 Hz to 5.8 GHz:

Offset from Carrier	SSB Phase Noise (dBc/1 Hz)
320 Hz	- 80
1 kHz	- 85
10 kHz	- 90
100 kHz	-105

DESCRIPTION:

A 5.7 GHz signal with low phase noise is input to the spectrum analyzer. The signal and noise sidebands are displayed on the analyzer and the trace is video averaged. The displayed noise sideband level at various frequency offsets is measured and the measured values are corrected for log amplification and detection errors, then normalized to a 1 Hz bandwidth. A second HP 8566A Spectrum Analyzer is used as the signal source for this test. Therefore, if the measured values are not within specification limits, either analyzer may be at fault.



Figure 4-30. Noise Sidebands Test Setup

EQUIPMENT:

Spectrum Analyzer (1ST LO OUTPUT) HP 8566A

4-29. NOISE SIDEBANDS TEST (Cont'd)

PROCEDURE:

1. Allow both analyzers to warm up for at least one half hour with LINE switch in either the STANDBY or ON position.
2. Connect CAL OUTPUT to RF INPUT. Press 2-22 GHz then RECALL 9 and adjust FREQ ZERO control for maximum signal amplitude. This performs frequency calibration of the analyzer. Perform this calibration on each of the two analyzers. When completed, press 2-22 GHz again on each of the analyzers.
3. Connect 1ST LO OUTPUT of source analyzer to RF INPUT of analyzer under test as indicated in Figure 4-30.
4. Key in the following on the source analyzer:

CENTER FREQUENCY 5.7 GHz

FREQUENCY SPAN 0 Hz

SHIFT MKR → REF LVL (Display diagnostics for convenience)

SHIFT RES BW (YTO Pretest Mode)

SWEEP SINGLE

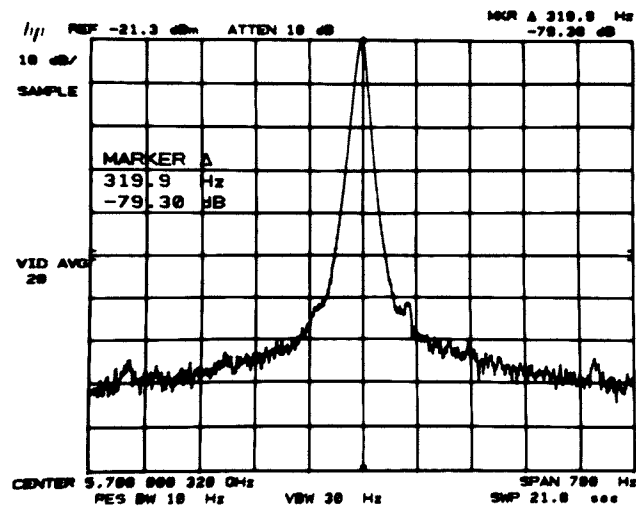


Figure 4-31. Noise Sidebands Measurement

4-29. NOISE SIDEBANDS TEST (Cont'd)

The first line of the diagnostic display and the CENTER readout should both now indicate 5.700 000 000 GHz. This is the 1ST LO OUTPUT frequency.

5. Key in the following on the analyzer under test:

CENTER
FREQUENCY 5.7 GHz

FREQUENCY
SPAN 5 kHz

6. Wait for the completion of the sweep (the asterisk should not appear at the upper right of the display), then press MARKER PEAK SEARCH, MKR → CF, MKR → REF LVL.
7. Change FREQUENCY SPAN to 700 Hz. Wait for the completion of the sweep, then press MARKER PEAK SEARCH, MKR → CF. Wait again for the completion of the sweep.
8. Press SHIFT VIDEO BW to initiate video averaging. When the VID AVG readout at the left edge of the display reaches 20, press SHIFT, TRACE B BLANK.
9. Press MARKER PEAK SEARCH, Δ and key in 320 Hz. Record the MARKER Δ amplitude: _____ dBc. See Figure 4-31.
10. Find the equivalent noise power bandwidth, BW_{enp} , for the 10 Hz resolution bandwidth filter by multiplying the 3 dB bandwidth recorded in Table 4-5 of the Resolution Bandwidth Accuracy Test by 1.13:

$$BW_{enp} = 1.13 \times \text{_____ Hz}$$

$$= \text{_____ Hz}$$

11. A correction factor of 2.5 dB must be added to the value measured in step 9 to compensate for logarithmic amplification and envelope detection. Add this correction, then subtract $10\log(BW_{enp})$ to compute the noise sideband level in dBc referenced to a 1 Hz bandwidth:

$$\text{_____ dBc} + 2.5 \text{ dB} - 10\log(BW_{enp}) = \text{_____ dBc/1 Hz}$$

The result should be $< -80 \text{ dBc/1 Hz}$.

12. Press SHIFT SWEEP TIME.
13. Change FREQUENCY SPAN to 2.5 kHz.
14. Press SHIFT VIDEO BW. When the VID AVG readout reaches 10, press SHIFT, TRACE B BLANK.
15. Press MARKER PEAK SEARCH, Δ and key in 1 kHz. Record the MARKER Δ amplitude: _____ dBc.
16. Compute the noise sideband level at a 1 kHz offset by the procedure of steps 10 and 11, but find BW_{enp} for the 30 Hz resolution bandwidth filter:

$$\text{_____ dBc} + 2.5 \text{ dB} - 10\log(BW_{enp}) = \text{_____ dBc/1 Hz}$$

The result should be $< -85 \text{ dBc/1 Hz}$.

PERFORMANCE TESTS

4-29. NOISE SIDEBANDS TEST (Cont'd)

17. Press **SHIFT** **SWEEP TIME** .
18. Change **FREQUENCY SPAN** to 25 kHz.
19. Press **SHIFT** **VIDEO BW** . When the VID AVG readout reaches 20 or higher, press **SHIFT** , TRACE B **BLANK** .
20. Press MARKER **PEAK SEARCH** , **Δ** and key in 10 kHz. Record the MARKER Δ amplitude: _____ dBc.
21. Compute the noise sideband level at a 10 kHz offset by the procedure of steps 10 and 11, using the 3 dB bandwidth recorded in Table 4-5 for the 300 Hz resolution bandwidth filter:

$$\text{_____ dBc} + 2.5 \text{ dB} - 10 \log(\text{BW}_{\text{enp}}) = \text{_____ dBc/1 Hz}$$

The result should be < -90 dBc/1 Hz.

22. Press **SHIFT** **SWEEP TIME** .
23. Change **FREQUENCY SPAN** to 250 kHz.
24. Press **SHIFT** **VIDEO BW** . When the VID AVG readout reaches 30 or greater, press **SHIFT** , TRACE B **BLANK** .
25. Press MARKER **PEAK SEARCH** , **Δ** and key in 100 kHz. Record the MARKER Δ amplitude: _____ dBc.
26. Compute the noise sideband level at a 100 kHz offset by the procedure of steps 10 and 11, using BW_{enp} for the 3 kHz filter:

$$\text{_____ dBc} + 2.5 \text{ dB} - 10 \log(\text{BW}_{\text{enp}}) = \text{_____ dBc/1 Hz.}$$

The result should be < -105 dBc/1 Hz.

4-30. LINE RELATED SIDEBANDS TEST

SPECIFICATION:

Offset from Carrier	Center Frequency	Sidebands
<360 Hz	≤100 MHz >100 Hz and <5.8 GHz	-70 dBc -60 dBc
360 Hz to 2 kHz	≤100 MHz	

4-30. LINE RELATED SIDEBANDS TEST (Cont'd)

OPTION 400:

For center frequencies > 100 Hz and < 5.8 GHz:

Offset from Carrier	Sidebands
<2 kHz	–55 dBc
2 kHz to 5.5 kHz	–65 dBc

DESCRIPTION:

The line related sidebands are measured on signals of 100 MHz, 2.4 GHz, 2.6 GHz and 5.7 GHz. A second HP 8566A Spectrum Analyzer is used as the signal source for this test. Therefore, if measured values are not within specified limits, either analyzer may be at fault.

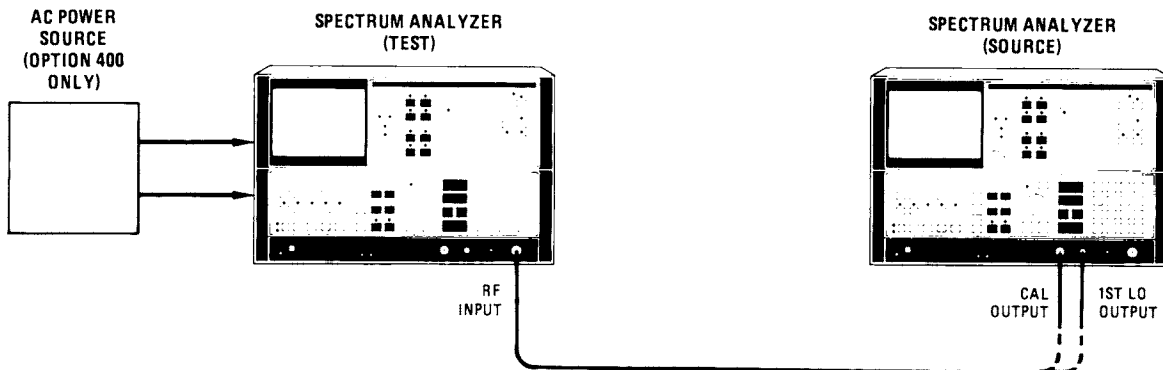


Figure 4-32. Line Related Sidebands Test Setup

EQUIPMENT:

Spectrum Analyzer (1ST LO OUTPUT) HP 8566A
AC Power Source (Option 400 ONLY) California Instruments Model 153T

PROCEDURE:

1. Allow both analyzers to warm up for at least one half hour with LINE switch in either the STANDBY or ON position.
2. Connect CAL OUTPUT to RF INPUT (both on same analyzer). Press 2-22 GHz then RECALL 9 and adjust FREQ ZERO control for maximum signal amplitude. This performs frequency calibration of the analyzer. Perform this calibration on each of the two analyzers. When complete, press 2-22 GHz on each analyzer.

4-30. LINE RELATED SIDEBANDS TEST (Cont'd)

3. Connect CAL OUTPUT of source analyzer to RF INPUT of analyzer under test.
4. Key in the following on the analyzer under test:

CENTER FREQUENCY 100 MHz
 FREQUENCY SPAN 1.2 kHz

Wait for asterisk (*) in upper-right of display to disappear.

5. Press MARKER PEAK SEARCH, MKR ← CF, MKR → REFLVL and wait for asterisk (*) to disappear. Trace should now be centered on display.
6. Press SHIFT VIDEO BW, SWEEP SINGLE, 1 0 Hz μV μV μV to initiate video averaging of 10 sweeps.
7. When VID AVG = 10, press SHIFT, TRACE B BLANK, TRACE A VIEW
8. Press MARKER PEAK SEARCH Δ and position the marker at the peaks of the line related sidebands separated from the signal by multiples of the line frequency (e.g., 120, 180, 240, 300, 360, 420, 480, and 540 Hz for a 60 Hz line frequency). The fundamental line frequency cannot be resolved. Refer to Figure 4-33.

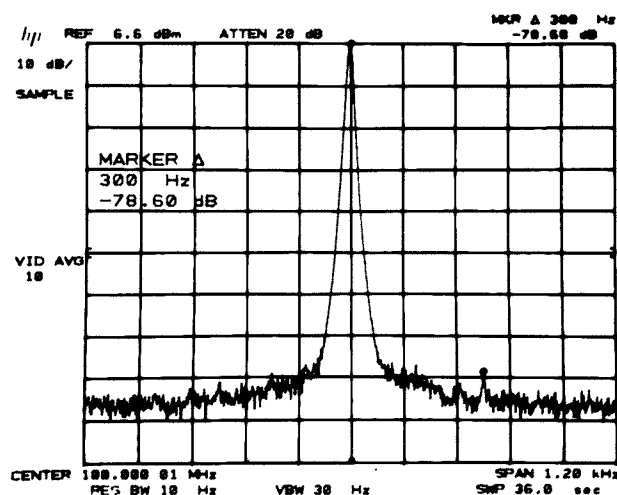


Figure 4-33. Line Related Sidebands Measurement

4-30. LINE RELATED SIDEBANDS TEST (Cont'd)

9. The MARKER Δ amplitude for all line related sidebands < 360 Hz away from the signal should be < -70 dB. The MARKER Δ amplitude for all line related sidebands from 360 Hz to 600 Hz away from the signal should be < -75 dB.

10. Press **SHIFT** **SWEEP TIME** , **SWEEP** **CONT** , **TRACE A** **CLEAR WRITE** .

11. Connect 1ST LO OUTPUT of source analyzer to RF INPUT of analyzer under test as indicated in Figure 4-32.

12. Key in the following on the source analyzer:

CENTER FREQUENCY 2.4 GHz
FREQUENCY SPAN 0 Hz
SHIFT **MKR-REF LVL** (Display diagnostics for convenience)
SHIFT **RES BW** (YTO Pretest Mode)
SWEEP **SINGLE**

The first line of the diagnostic display and the CENTER readout should both now indicate 2.400 000 000 GHz. This is the 1ST LO OUTPUT frequency.

13. Key in **CENTER FREQUENCY** 2.4 GHz and **REFERENCE LEVEL** +10 dBm on the analyzer under test. Wait for asterisk (*) to disappear.

14. Repeat steps 5 through 8.

15. The MARKER Δ amplitude for all line related sidebands < 360 kHz away from the signal should be < -60 dB.

16. Press **SHIFT** **SWEEP TIME** , **SWEEP** **CONT** , **TRACE A** **CLEAR WRITE**

17. Change **CENTER FREQUENCY** of both the source and test analyzer to 2.6 GHz. Wait for asterisk (*) to disappear.

18. Press **MARKER** **OFF** , **PRESEL PEAK** and wait for PEAKING! message to disappear from the CRT.

19. Repeat steps 5 through 8.

20. The MARKER Δ amplitude for all line related sidebands < 360 Hz away from the signal should be < -60 dB.

21. Press **SHIFT** **SWEEP TIME** , **SWEEP** **CONT** , **TRACE A** **CLEAR WRITE**

22. Change **CENTER FREQUENCY** of both the source and test analyzer to 5.7 GHz. Wait for asterisk (*) to disappear.

23. Press **MARKER** **OFF** , **PRESEL PEAK** and wait for the PEAKING! message to disappear from the CRT.

4-30. LINE RELATED SIDEBANDS TEST (Cont'd)

24. Repeat steps 5 through 8.
25. The MARKER Δ amplitude for all line related sidebands < 360 Hz away from the signal should be < -60 dB.

OPTION 400

1. Set the AC power source output equal to the required line voltage and frequency. The analyzer under test should be operated at 400 Hz and the source analyzer at 50-60 Hz.
2. Allow both analyzers to warm up for at least one half hour with LINE switch in either STANDBY or ON position.
3. Perform frequency calibration of each analyzer as specified in step 2 of standard instrument procedure.
4. Connect 1ST LO OUTPUT of source analyzer to RF INPUT of analyzer under TEST and key in settings on source analyzer as specified in step 12 of standard instrument procedure.
5. Key in CENTER
FREQUENCY 2.4 GHz, FREQUENCY
SPAN 1 MHz on analyzer under test.
6. Press MARKER PRESEL
PEAK and wait for PEAKING! message to disappear from display.
7. Press MARKER PEAK
SEARCH , MKR
CF , MKR
REF LVL , SIGNAL
TRACK
8. Change FREQUENCY
SPAN to 12 kHz. Wait for signal trace to be centered.
9. Change RES
BW to 30 Hz.
10. Press SHIFT , VIDEO
BW , SWEEP SINGLE , 1 0 Hz
AV
HRC to initiate video averaging of 10 sweeps.
11. When the VID AVG readout reaches 10, press SHIFT , TRACE B BLANK , TRACE A VIEW
12. Press MARKER PEAK
SEARCH , Δ and position the marker at the peaks of the line related sidebands separated from the signal by multiples of the line frequency; i.e., 400 Hz, 800 Hz, 1200 Hz, ...
13. The MARKER Δ amplitude for all line sidebands below 2 kHz should be < -55 dB. The Δ amplitude for sidebands from 2 kHz to 5.5 kHz should be < -65 dB.
14. Change CENTER
FREQUENCY of source analyzer to 5.7 GHz and repeat steps 5 through 13 for 5.7 GHz.

4-31. AVERAGE NOISE LEVEL TEST

RELATED ADJUSTMENT:

Last Converter Adjustments

SPECIFICATION:

Displayed average noise level (0 dB input attenuation, 10 Hz resolution bandwidth):

Non-Preselected

< - 95 dBm, 100 Hz to 50 kHz
 < -112 dBm, 50 kHz to 1 MHz
 < -134 dBm, 1 MHz to 2.5 GHz

Preselected

< -132 dBm, 2.0 GHz to 5.8 GHz
 < -125 dBm, 5.8 GHz to 12.5 GHz
 < -129 dBm, 12.5 GHz to 18.6 GHz
 < -114 dBm, 18.6 GHz to 22 GHz

DESCRIPTION:

The displayed average noise level is measured in a 10 Hz bandwidth at various frequencies with no signal applied to the analyzer input.

EQUIPMENT:

50 Ohm Coaxial Termination. HP 909A, Option 012

PROCEDURE:

1. Press 2-22
GHz.
2. Connect CAL OUTPUT to RF INPUT.
3. Press RECALL 8. Adjust AMPTD CAL for a MARKER amplitude of -10.00 dBm \pm 0.02 dB.
4. Disconnect CAL OUTPUT. Terminate RF INPUT with a 50 ohm coaxial termination.
5. Press 0-25
GHz. Key in settings as follows:

START FREQ	.....	80 Hz
STOP FREQ	.....	180 Hz
REFERENCE LEVEL	.....	-70 dBm
ATTEN	.....	0 dB
VIDEO BW	.....	3 Hz

PERFORMANCE TESTS

4-31. AVERAGE NOISE LEVEL TEST (Cont'd)

6. Press **SHIFT** **VIDEO BW** . Wait about 2 minutes for the VID AVG readout to reach 10 sweeps or more, then press **SHIFT** , **TRACE B** **BLANK** .
7. Press **MARKER** **NORMAL** . Tune to 100 Hz, or the nearest frequency that is not on the slope of the LO feedthrough or on a line related sideband (e.g., 120 Hz). Refer to Figure 4-34.

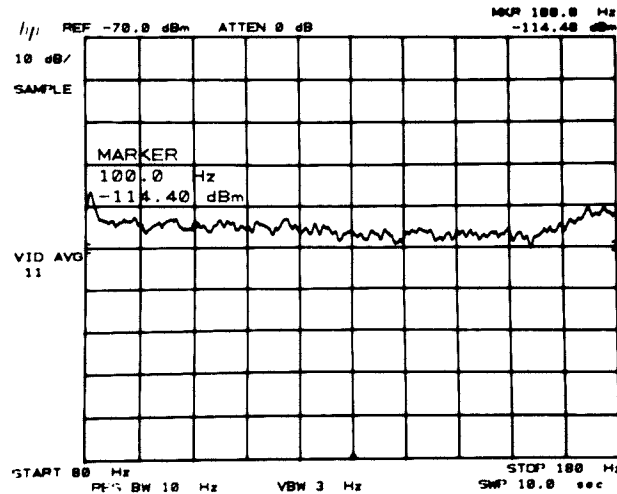


Figure 4-34. Average Noise Level Measurement

8. Read the noise level from the MARKER amplitude readout. The value should be less than -95 dBm.
9. Key in the following settings:

CENTER FREQUENCY	.....	50 kHz
FREQUENCY SPAN	.....	0 Hz
SWEEP TIME	.....	20 msec

10. Wait several seconds for the trace to stabilize (VID AVG > 20). Read the amplitude from the MARKER readout: _____ dBm. The value should be less than -112 dBm.
11. Set **CENTER FREQUENCY** according to Table 4-20. At each setting, allow several seconds for the trace to stabilize before reading the amplitude from the MARKER readout. The maximum allowable level for each frequency is given in the table.

PERFORMANCE TESTS

4-31. AVERAGE NOISE LEVEL TEST (Cont'd)

Table 4-20. Average Noise Level

CENTER FREQUENCY	MARKER amplitude (dBm)	Maximum Amplitude (dBm)
2 MHz	_____	-134
1 GHz	_____	-134
2.499 GHz	_____	-134
2.510 GHz	_____	-132
5.799 GHz	_____	-132
5.810 GHz	_____	-125
12.499 GHz	_____	-125
12.510 GHz	_____	-119
18.59 GHz	_____	-119
18.61 GHz	_____	-114
22.0 GHz	_____	-114

4-32. RESIDUAL RESPONSES TEST

SPECIFICATION:

- < -100 dBm, 100 Hz to 5.8 GHz
- < -95 dBm, 5.8 GHz to 12.5 GHz
- < -85 dBm, 12.5 GHz to 18.6 GHz
- < -80 dBm, 18.6 GHz to 22 GHz

DESCRIPTION:

The spectrum analyzer is tested for residual responses across its frequency range with no signal applied and 0 dB input attenuation.

EQUIPMENT:

50 Ohm Coaxial Termination. HP 909A, Option 012

PROCEDURE:

1. Press 2-22 GHz.
2. Connect CAL OUTPUT to RF INPUT. Press RECALL 8.

4-32. RESIDUAL RESPONSES TEST (Cont'd)

- Adjust AMPTD CAL for a MARKER amplitude of $-10.00 \text{ dBm} \pm 0.02 \text{ dB}$.
- Press **0-25 GHz**. Disconnect CAL OUTPUT and terminate RF INPUT with a 50 ohm coaxial termination.
- Key in the following:

REFERENCE LEVEL	.....	-20 dBm
ATTEN	.....	0 dB
RES BW	.....	30 kHz
VIDEO BW	.....	1 kHz
STOP FREQ	.....	1.5 GHz

- Press DISPLAY LINE **ENTER** and key in -100 dBm .

NOTE

There should be at least 3 dB margin between the noise trace and the display line so that any residual responses may be distinguished from the noise. It may be necessary to reduce the resolution and/or video bandwidths from the settings given in this procedure to achieve this margin. If this causes the MEAS UNCAL message to appear, it will be necessary to reduce the frequency span and use more sweeps to cover the frequency range.

- Press TRACE A **CLEAR WRITE**, SWEEP **SINGLE**. Wait for completion of the sweep (see Figure 4-35).

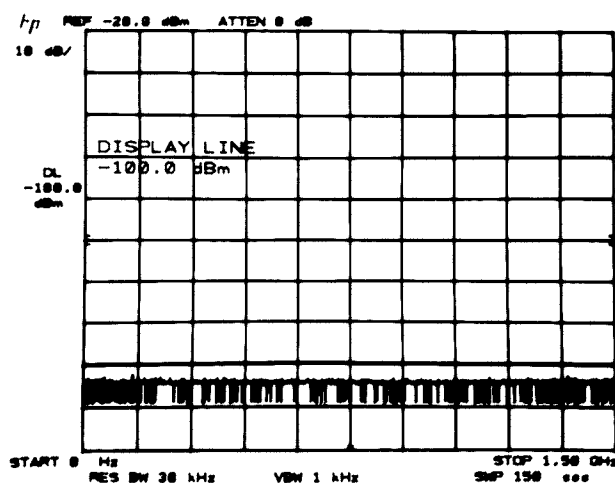


Figure 4-35. Residual Responses Measurement

4-32. RESIDUAL RESPONSES TEST (Cont'd)

8. Look for any residual responses at or above the display line. If a residual is suspected, press SWEEP again and see if the response persists. A residual will persist on repeated sweeps, but a noise peak will not. Any residual responses must be below the display line.
9. If a response appears marginal, perform the following check to determine whether or not it exceeds the specification:
 - a. Press .
 - b. Press MARKER and place the marker on the peak of the response in question.
 - c. Press MARKER , then activate SWEEP .
 - d. Reduce to 1 MHz. Reduce until there is at least a 7 dB margin between the display line and the average noise level. The amplitude of the response must be less than the display line setting.
 - e. Press to resume the search for residuals.

10. Key in control settings as follows:

<input type="button" value="START FREQ"/>	1.4 GHz
<input type="button" value="STOP FREQ"/>	2.5 GHz

11. Follow the procedure of steps 7 through 9 to determine if there are any residuals > -100 dBm in this frequency range.
12. Key in the following settings:

<input type="button" value="RES BW"/>	3 kHz
<input type="button" value="VIDEO BW"/>	3 kHz
<input type="button" value="START FREQ"/>	2.4 GHz
<input type="button" value="STOP FREQ"/>	5.8 GHz

13. Look for residual responses by the procedure of steps 7 through 9.

4-32. RESIDUAL RESPONSES TEST (Cont'd)

14. Key in settings as follows

CENTER FREQUENCY	.....	6.2 GHz
CF STEP SIZE	.....	990 MHz
FREQUENCY SPAN	.....	1 GHz
VIDEO BW	.....	1 kHz

15. Set the display line at -95 dBm. Check for residual responses by the procedure of steps 7 though 9.

16. Step CENTER
FREQUENCY to 11.150 GHz with ↑ and check for residual responses at each step by the procedure of steps 7 through 9.

17. Key in the following settings:

START FREQ	.....	11.6 GHz
STOP FREQ	.....	12.5 GHz
VIDEO BW	.....	3 kHz

18. Check for residual responses by the procedure of steps 7 through 9.

19. Key in analyzer settings as follows:

START FREQ	.....	12.4 GHz
STOP FREQ	.....	18.6 GHz
RES BW	.....	100 kHz
VIDEO BW	.....	3 kHz

20. Set the display line at -85 dBm.

21. Check for residual responses by the procedure of steps 7 through 9.

22. Key in the following:

START FREQ	.....	18.5 GHz
STOP FREQ	.....	22 GHz

23. Set the display line at -80 dBm.

24. Check for residual responses by the procedure of steps 7 through 9.

4-33. HARMONIC AND INTERMODULATION DISTORTION TEST

SPECIFICATION:

Second Harmonic Distortion:

Center Frequency	Level at Mixer	Harmonic Distortion
100 Hz to 0.7 GHz non-preselected	≤ -40 dBm	< -80 dBc
0.7 GHz to 2.5 GHz non-preselected	≤ -40 dBm	< -70 dBc
2 to 22 GHz preselected	≤ -10 dBm	< -100 dBc

Intermodulation Distortion:

Third Order Intercept (TOI): $> +7$ dBm, 100 Hz to 5.8 GHz
 $> +5$ dBm, 5.8 GHz to 18.6 GHz

DESCRIPTION:

Second harmonic distortion in the non-preselected and preselected bands is checked with a signal source and low-pass filter. The low-pass filter ensures that the harmonics measured are due to the analyzer and not the source. Third order intermodulation distortion is measured in the non-preselected and preselected bands with two signal sources. To prevent source interaction, the synthesizer outputs are padded and combined in a reactive power divider.

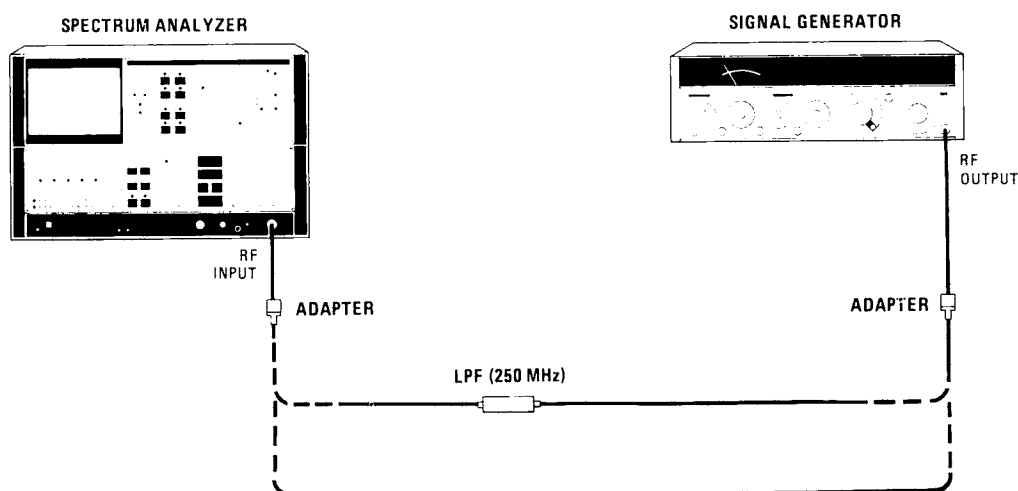


Figure 4-36. Harmonic Distortion Test Setup (100 Hz to 2.5 GHz)

4-33. HARMONIC AND INTERMODULATION DISTORTION TEST (Cont'd)

NOTE

Equipment listed is for three test setups, Figures 4-36, 4-37, and 4-38.


EQUIPMENT:




Signal Generator	HP 8640B, Option 002
Synthesized Signal Generator (2 required)	HP 8672A
Power Meter	HP 436A
Power Sensor	HP 8481A
Reactive Power Divider	Omni-Spectra 2090-6202-00
20 dB Attenuator (2 required)	HP 8493B, Option 020
3 dB Attenuator	HP 8493B, Option 003
Low-Pass Filter	K&L 5L380-250-B/B
Low-Pass Filter	K&L 6L250-8000-NP/N
61 cm (24 in.) Cable Assembly, SMA Male	
Connectors	B&W 55-S142-55-24
Adapter, Type N Male to BNC Female (2 required)	HP 1250-0780
Adapter, Type N Male to SMA Female (3 required)	HP 1250-1250
Adapter, Type N Female to SMA Female	HP 86290-60005
Adapter, SMA Male to SMA Male	HP 1250-1159
BNC Tee (2 required)	HP 1250-0781





PROCEDURE:

Harmonic Distortion

1. Set the 8640B for an output frequency of 230.00 MHz and an output level of -30 dBm. Press LOCK ON.

2. Press  on the analyzer. Key in:

	.....	230 MHz
	.....	100 kHz
	.....	-30 dBm

3. Connect equipment as shown in Figure 4-36, using the 250 MHz low-pass filter. Adjust generator output level to place peak of signal trace at the reference level line.
4. Press DISPLAY LINE  and key in -110 dBm.
5. Press MARKER , , .

4-33. HARMONIC AND INTERMODULATION DISTORTION TEST (Cont'd)

6. Activate **CENTER FREQUENCY** and press **↑** to tune to the second harmonic of the input signal.
7. Reduce **FREQUENCY SPAN** to 10 kHz and **VIDEO BW** to 30 Hz. Reduce **RES BW**, if necessary, for a margin of ≥ 5 dB between the displayed noise and the display line.
8. The second harmonic should be below the display line (< -80 dBc).
9. Remove the low-pass filter and connect the 8640B output directly to the analyzer.
10. Set the 8640B to 800.000 MHz and press LOCK ON.
11. Press **2-22 GHz** on the analyzer. Key in:

CENTER FREQUENCY	.....	800 MHz
FREQUENCY SPAN	.....	100 kHz
REFERENCE LEVEL	.....	-30 dBm

12. Adjust signal generator to set peak of signal trace at the reference level line.

NOTE

If unable to locate a harmonic distortion product, increase the generator output by 10 dB. Be sure to return the output level to the original setting before making a measurement.

13. Press DISPLAY LINE **ENTER** and key in -100 dBm.
14. Press MARKER **PEAK SEARCH**, **MKR ← CF**, **MKR/Δ ← STP SIZE**, **CENTER FREQUENCY** **↑**, **FREQUENCY SPAN** 10 kHz.
15. The second harmonic of the input signal should be below the display line (< -70 dBc).
16. Connect equipment as shown in Figure 4-37. Set FREQ REFERENCE switch on 8566A rear panel to INT and FREQ STANDARD switch on 8672A rear panel to EXT.
17. Set 8672A for an output frequency of 7200.000 MHz and an output level of 0 dBm.
18. Press **2-22 GHz** on the analyzer. Key in the following:

CENTER FREQUENCY	.....	7.2 GHz
FREQUENCY SPAN	.....	100 kHz

4-33. HARMONIC AND INTERMODULATION DISTORTION TEST (Cont'd)

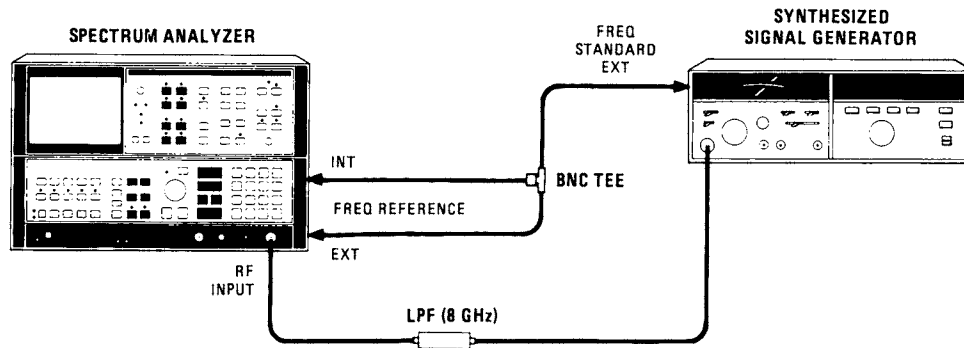


Figure 4-37. Harmonic Distortion Test Setup (2 to 22 GHz)

19. Press MARKER , .
20. Set to 10 kHz. Press MARKER , , .
21. Adjust OUTPUT LEVEL of synthesizer to place peak of signal trace at the reference level line.
22. Press DISPLAY LINE and key in -80 dBm.
23. Activate and press to tune to the second harmonic of the input signal.
24. Key in the following:

<input type="button" value="REFERENCE LEVEL"/>	-20 dBm
<input type="button" value="FREQUENCY SPAN"/>	1 kHz

25. The second harmonic should be below the display line (< -100 dBc).

Intermodulation Distortion

26. Set both 8672A frequency synthesizers as follows:

RANGE	$+10$ dBm
METER MODE.....	LEVEL
RF OUTPUT	OFF
ALC	INT
AM.....	OFF
FM DEVIATION MHz.....	OFF

4-33. HARMONIC AND INTERMODULATION DISTORTION TEST (Cont'd)

27. Connect equipment as shown in Figure 4-38 with "output" of power divider connected to power sensor. The FREQ REFERENCE switch on the rear panel of the analyzer should be set to INT and the FREQ REFERENCE switch on both synthesizer rear panels should be set to EXT.

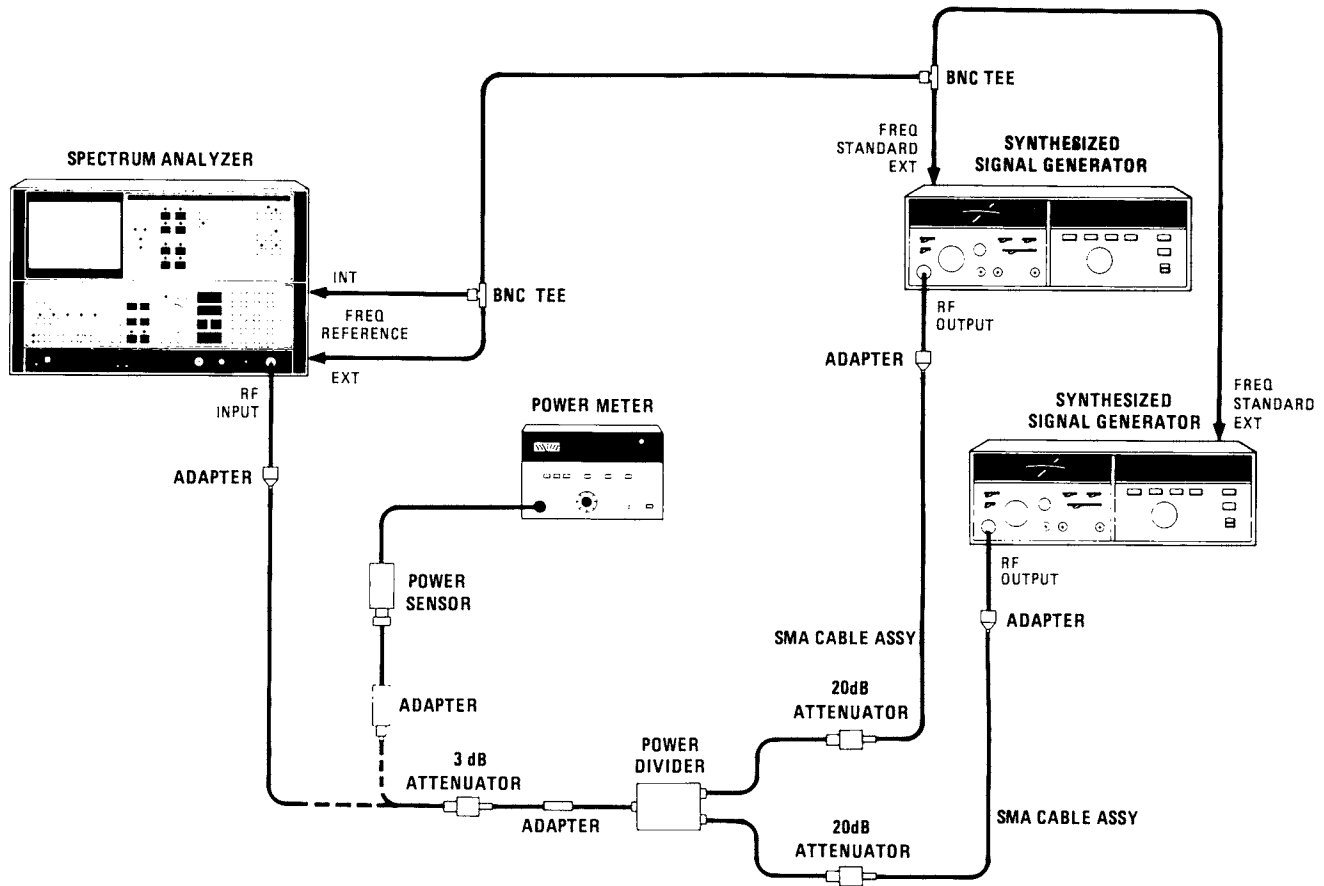


Figure 4-38. Intermodulation Distortion Test Setup


28. Set one synthesizer to 2099.500 MHz, the other to 2100.500 MHz.
29. Set one synthesizer RF OUTPUT switch to ON and adjust OUTPUT LEVEL for a power meter indication of $-25.00 \text{ dBm} \pm 0.20 \text{ dB}$. Return the RF OUTPUT switch to the OFF setting.

4-33. HARMONIC AND INTERMODULATION DISTORTION TEST (Cont'd)





30. Set other synthesizer RF OUTPUT switch to ON and adjust OUTPUT LEVEL for a power meter indication of $-25.00 \text{ dBm} \pm 0.20 \text{ dB}$. Set both synthesizer RF OUTPUT switches to the ON position (power meter reading should be approximately -22 dBm).
31. Connect output of power divider to analyzer RF INPUT as shown in Figure 4-38.









NOTE

Be careful to flex the cable assemblies as little as possible, as flexing can cause a change in the measured power level. To minimize flexing, place the power sensor close to the analyzer input.

32. Press  on the spectrum analyzer.

33. Key in analyzer settings as follows:

	..... 2099.5 MHz
	..... 1 MHz
	..... 2 kHz
	..... 0 dB

34. Wait for completion of the sweep (asterisk should not appear on display), then press MARKER  ,  . Wait for completion of the sweep.
35. Press MARKER  . Activate  and press  once to tune to the third order product at 2098.5 MHz.
36. Wait for completion of the sweep, then press MARKER  . Record the MKR Δ amplitude: _____ dB.
37. Press  three times to tune to the third order product at 2101.5 MHz. Wait for completion of the sweep, then press MARKER  . Record the MKR Δ amplitude: _____ dB.
38. Choose the smallest MKR Δ amplitude in steps 36 and 37 and record its absolute value: _____ dB. (For example, if one MKR Δ amplitude is -82 dB and the other is -79 dB , record $+79 \text{ dB}$.) This value is S, the third order suppression.

4-26. HARMONIC AND INTERMODULATION DISTORTION TEST (Cont'd)

39. Compute the third order intercept (TOI) as follows:

TOI = $P + S/2$, where P = input signal power, and S = third order suppression from step 41.

$$\begin{aligned} \text{TOI} &= -25 \text{ dBm} + \frac{\text{dB}}{2} \\ &= \text{dBm} \end{aligned}$$

40. The result should be $> +7 \text{ dBm}$. Refer to Figure 4-39.
41. Set one synthesizer to 3999.500 MHz, the other to 4000.500 MHz.
42. Connect the output of the power divider to the power sensor as shown in Figure 4-38.

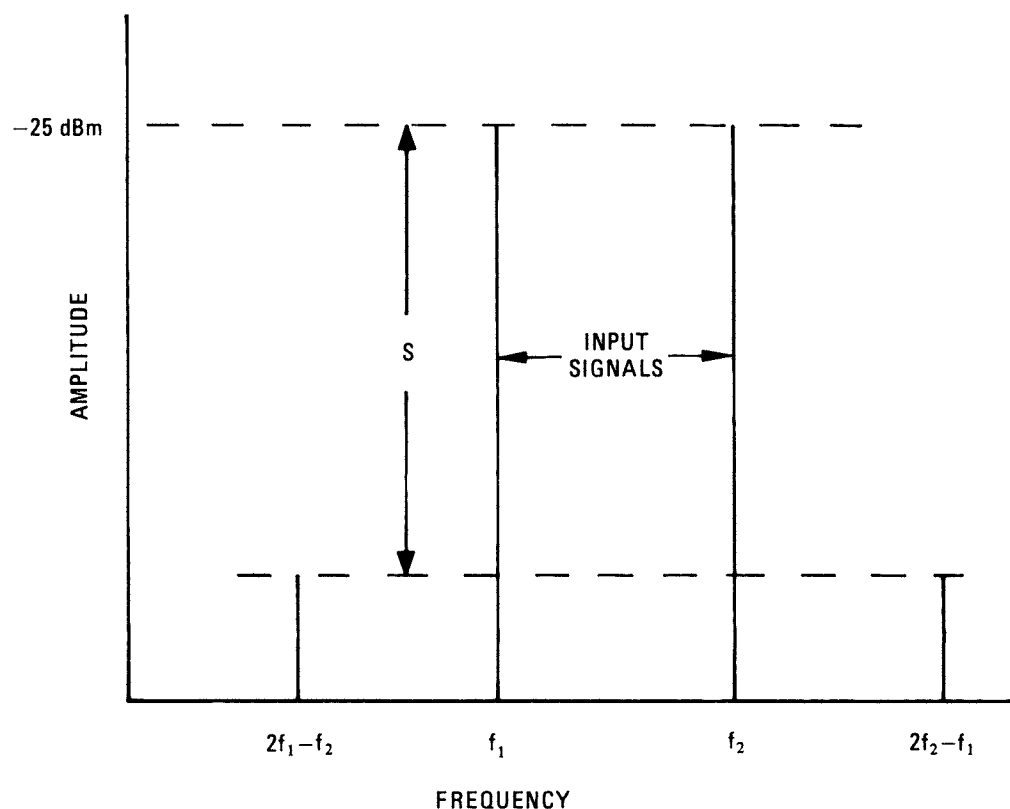




Figure 4-39. Third Order Intermodulation Products


43. Set RF OUTPUT switch on both synthesizers to the OFF position. Set output levels of synthesizers according to the procedure of steps 29 and 30.
44. Connect the output of the power divider to the analyzer input as shown in Figure 4-38.



4-33. HARMONIC AND INTERMODULATION DISTORTION TEST (Cont'd)




45. Key in the following analyzer settings:


CENTER FREQUENCY	.....	3999.5 MHz
FREQUENCY SPAN	.....	1 MHz
REFERENCE LEVEL	.....	-20 dBm



46. Press MARKER ,  and wait for PEAKING! message to disappear from display.

47. Set  to 2 kHz and wait for completion of the sweep.

48. Press MARKER , . Wait for completion of the sweep.

49. Press MARKER . Activate  and press  once to tune to the third order product at 3998.5 MHz. Wait for completion of the sweep.

50. Press MARKER  and record the MKR Δ amplitude: _____ dB.

51. Press  three times to tune to the third order product at 4001.5 MHz. Wait for completion of the sweep, then press MARKER . Record the MKR Δ amplitude: _____ dB.

52. Choose the smallest MKR Δ amplitude in steps 50 and 51 and record its absolute value: S = _____ dB.

53. Compute the TOI:

$$\begin{aligned}
 \text{TOI} &= P + S/2 \\
 &= -25 \text{ dBm} + \text{_____ dB/2} \\
 &= \text{_____ dBm.}
 \end{aligned}$$

54. The result should be $> +7$ dBm.

55. Repeat steps 41 through 53 for the input signal frequencies and third order products shown in Table 4-21. The TOI for each setting should be $> +5$ dBm.

Table 4-21. TOI Measurement Settings

Input Signal Frequencies (MHz)		Third Order Products (MHz)	
8999.500	9000.500	8998.500	9001.500
13999.500	14000.499	13998.501	14001.498

4-34. IMAGE, MULTIPLE, AND OUT-OF-BAND RESPONSES TEST

SPECIFICATION:

Image responses (due to the mixing of signals two times the IF frequency — 2×321.4 MHz — above or below the tune frequency):

- < -70 dBc, 100 Hz to 18.6 GHz
- < -60 dBc, 18.6 to 20 GHz
- < -50 dBc, 20 GHz to 22 GHz

Multiple responses (due to the input signal mixing with more than one local oscillator harmonic):

- < -70 dBc, 100 Hz to 22 GHz

Out-of-band responses (due to the mixing of input signals outside the preselector's frequency span):

- < -60 dBc, 2 to 22 GHz

DESCRIPTION:

Image and out-of-band responses are checked by setting the analyzer center frequency to several frequencies across the analyzer range and tuning a leveled signal source to the frequencies determined by the tuning equation, $F_{\text{sig}} = nF_{\text{LO}} \pm F_{\text{IF}}$. Input signals at these frequencies will excite all possible image and out-of-band responses for a given 1st LO frequency and all positive integer values of n . In this test, only values of n corresponding to the analyzer mixing modes are used. Multiple responses are checked by applying an input signal and measuring the response at those center frequencies for which a harmonic of the 1st LO mixes with the input signal.

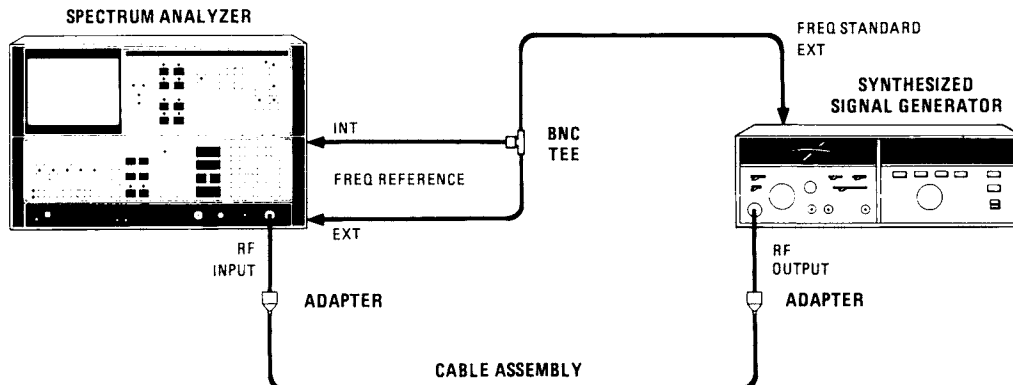


Figure 4-40. Image, Multiple, and Out-of-Band Responses Test Setup

PERFORMANCE TESTS

4-34. IMAGE, MULTIPLE, AND OUT-OF-BAND RESPONSES TEST (Cont'd)

EQUIPMENT:


Synthesized Signal Generator HP 8672A
61 cm (24 in.) Cable Assembly, SMA Male Connectors B&W 55-S142-55-24
Adapter, Type N Male to SMA Female (2 required) HP 1250-1250
BNC Tee HP 1250-0781



PROCEDURE:




1. Connect equipment as shown in Figure 4-40 with synthesizer output connected to analyzer input. The **FREQ REFERENCE** switch on the rear panel of the 8566A should be set to **INT** and the **FREQ STANDARD** switch on the 8672A rear panel should be set to **EXT**.

2. Set controls on the 8672A as follows:

METER MODE LEVEL
RF OUTPUT ON
OUTPUT LEVEL
RANGE 00 dBm
VERNIER fully counterclockwise
ALC INT
AM OFF
FM DEVIATION MHz OFF

3. Press  on the analyzer.
4. Set the synthesizer frequency to 3000.000 MHz.
5. Key in the following analyzer settings:

 3 GHz
 100 kHz

6. Press **DISPLAY LINE**  and key in **-70 dBm**.
7. Press **MARKER**  and wait for **PEAKING!** message to disappear from the display. Press **MARKER** .
8. Adjust **OUTPUT LEVEL** of synthesizer to place the peak of the signal trace at the reference level line.
9. Set the synthesizer to the frequencies in Table 4-22 corresponding to an analyzer center frequency of 3 GHz. The maximum allowable amplitude of the spurious response at the analyzer center frequency for each setting is shown in the table.

PERFORMANCE TESTS

4-34. IMAGE, MULTIPLE, AND OUT-OF-BAND RESPONSES TEST (Cont'd)

Table 4-22. Image and Out-of-Band Responses

<div style="border: 1px solid black; border-radius: 5px; padding: 2px; display: inline-block;"> CENTER FREQUENCY </div> (GHz)	Synthesizer Frequency (MHz)	Maximum Displayed Spurious Amplitude (dBm)
3	3642.800	-70
	6321.400	-60
	6964.200	-60
6	2517.900	-60
	3160.700	-60
	5357.200	-70
9	4017.900	-60
	4660.700	-60
	8357.200	-70
	12696.500	-60
	13339.300	-60
12	5517.900	-60
	6160.700	-60
	11357.200	-70
	17196.500	-60
	17839.300	-60
15	4571.500	-60
	5214.300	-60
	9464.300	-60
	10107.100	-60
	14357.200	-70
17	5238.100	-60
	5880.900	-60
	10797.700	-60
	11440.500	-60
	16357.200	-70
19	4348.300	-60
	4991.100	-60
	9017.900	-60
	9660.700	-60
	13687.600	-60
	14330.400	-60
21	18357.200	-60
	4848.300	-60
	5491.100	-60
	10017.900	-60
	10660.700	-60
	15187.600	-60
	15830.400	-60
	20357.200	-50

PERFORMANCE TESTS

4-34. IMAGE, MULTIPLE, AND OUT-OF-BAND RESPONSES TEST (Cont'd)

10. Repeat steps 4 through 9 for all remaining **CENTER FREQUENCY** and synthesizer settings in Table 4-22. Steps 4 through 8 need only be done once for each **CENTER FREQUENCY** setting; they cannot be performed for the 19 GHz and 21 GHz center frequencies.
11. Set synthesizer to 5700.000 MHz.
12. Change **CENTER FREQUENCY** to 5.7 GHz.
13. Press **MARKER** **PRESEL PEAK** and wait for **PEAKING!** message to disappear from display. Press **MARKER** **OFF**.
14. Change **FREQUENCY SPAN** to 5 kHz. Adjust synthesizer **OUTPUT LEVEL** to place peak of signal trace at the reference level line.
15. Press **SHIFT**, **SWEEP** **CONT**.
16. Change **CENTER FREQUENCY** to 2.36790 GHz. The multiple response at the center frequency should be below the display line (≤ -70 dBc).
17. Press **SHIFT**, **MRR/D- STP SIZE**.
18. Set synthesizer frequency and analyzer **CENTER FREQUENCY** according to Table 4-23. Before checking the amplitude of the multiples for a given signal frequency, set the input signal amplitude by the procedure of steps 11 through 14. All multiple responses should be below the display line (≤ 70 dBc).

Table 4-23. Multiple Responses

Synthesizer Frequency (MHz)	CENTER FREQUENCY (Multiple Response) (GHz)
5700.000	2.68930
12000.000	8.107133 8.535667
15000.000	10.107133 10.535667

4-35. GAIN COMPRESSION TEST

SPECIFICATION:

<1.0 dB, 100 Hz to 22 GHz, ≤ -5 dBm at the input mixer

DESCRIPTION:

Gain compression is measured by changing the power level at the input mixer from -10 dBm to 0 dBm (0 to 2.5 GHz) or -15 dBm to -5 dBm (2 to 22 GHz). The displayed signal level will change by less than 10 dB, indicating gain compression of the input mixer. Since a 10 dB change in IF gain is used to keep the signal trace near the same point on the display when the input power is increased, the error due to this IF gain change is first measured, then subtracted from the displayed deviation to give the deviation due to compression only.

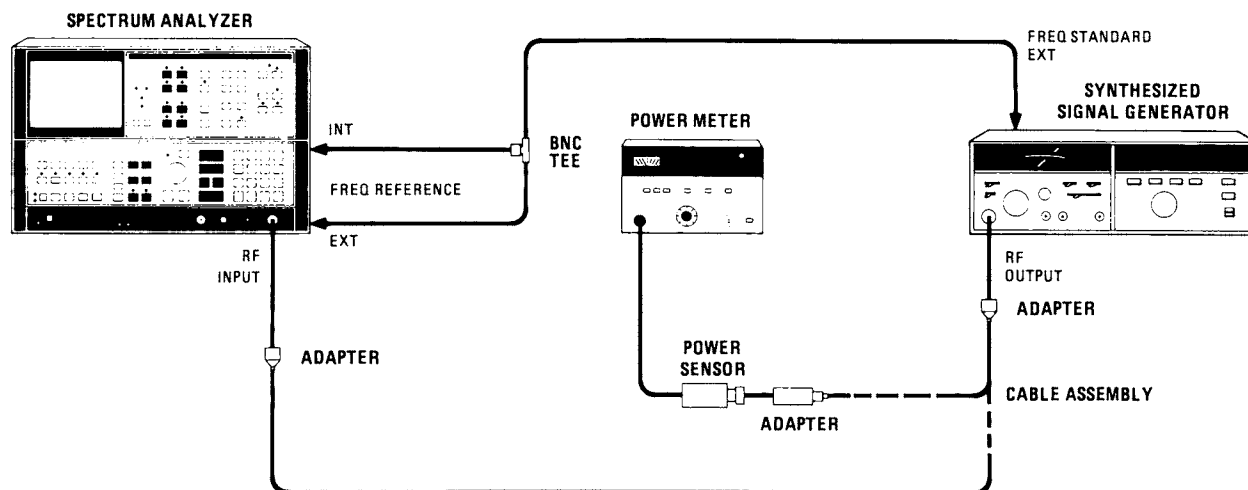


Figure 4-41. Gain Compression Test Setup

EQUIPMENT:

Synthesized Signal Generator	HP 8672A
Power Meter	HP 436A
Power Sensor	HP 8481A
61 cm (24 in.) Cable Assembly, SMA Male Connectors	B&W 55-S142-55-24
Adapter, Type N Male to SMA Female (2 required)	HP 1250-1250
Adapter, Type N Female to SMA Female	HP 86290-60005

4-35. GAIN COMPRESSION TEST (Cont'd)

PROCEDURE:

1. Press **2.22 GHz**, **SHIFT** **ATTEN**, **SHIFT** **0.25 GHz** 0 dB on the analyzer. Set FREQ REFERENCE switch on rear panel of analyzer to INT and set FREQ STANDARD switch on rear panel of synthesizer to EXT.
2. Set synthesizer frequency to 2000.000 MHz. Set other synthesizer controls as follows:

ALC	INT
AM	OFF
FM DEVIATION MHz.	OFF
RF OUTPUT	ON
OUTPUT LEVEL	
RANGE	-20 dBm

NOTE

Care should be taken to disturb the cable assembly as little as possible, since flexing may cause a change in the measured power level. The power sensor or thermistor mount should be placed near the analyzer input to minimize flexing when the cable is moved.

3. Connect equipment as shown in Figure 4-41 with output of synthesizer connected to power sensor. Power is measured at the end of the cable assembly, not at the synthesizer output connector. Adjust synthesizer output level for a power meter indication of $-20.00 \text{ dBm} \pm 0.05 \text{ dB}$.
4. Disconnect cable assembly from power sensor and connect free end to analyzer RF INPUT as indicated in Figure 4-41. Key in analyzer settings as follows:

CENTER FREQUENCY	2 GHz
FREQUENCY SPAN	0 Hz
ATTEN	0 dB
REFERENCE LEVEL	-10 dBm
VIDEO BW	30 Hz

5. Press the SCALE LIN pushbutton, then press **SHIFT** **AUTO** (resolution bandwidth) to obtain amplitude readouts in dB.

PERFORMANCE TESTS

4-35. GAIN COMPRESSION TEST (Cont'd)

6. Press MARKER NORMAL , Δ .
7. Connect cable to power sensor and adjust synthesizer output level for a power meter reading of $-10.00 \text{ dBm} \pm 0.02 \text{ dB}$.
8. Reconnect cable to analyzer RF INPUT.
9. Change analyzer REFERENCE LEVEL to 0 dBm. Record the MKR Δ amplitude: _____ dB. This is the IF gain error in changing the reference level from -10 dBm to 0 dBm with 0 dB input attenuation.
10. Set REFERENCE LEVEL to -10 dBm . Adjust AMPTD CAL to place the signal trace approximately 1 division down from the reference level line.
11. Press MARKER NORMAL , Δ .
12. Connect cable to power sensor and adjust synthesizer output level for a power meter indication of $0.00 \text{ dBm} \pm 0.02 \text{ dB}$. Reconnect cable to analyzer input.
13. Change REFERENCE LEVEL to 0 dBm . Record the MKR Δ amplitude: _____ dB.
14. Subtract the value obtained in step 9 from the value recorded in step 13 to find the gain compression: _____ dB. The result should be $> -1.0 \text{ dB}$ (less than 1 dB compression).
15. Press 2-22 GHz on the analyzer. Press SHIFT ATTEN , SHIFT 0-25 GHz 0 dB .
16. Set synthesizer to 3000.000 MHz . connect cable to power sensor and adjust output level of synthesizer for an indication of $-25.00 \text{ dBm} \pm 0.05 \text{ dB}$ on the power meter. Reconnect cable to analyzer input.
17. Key in the following settings:

CENTER FREQUENCY	.....	3 GHz
FREQUENCY SPAN	.....	1 MHz
ATTEN	.....	0 dB

18. Press MARKER PRESEL PEAK and wait for PEAKING! message to disappear from the display.
19. Press SCALE LIN pushbutton, then press SHIFT AUTO (resolution bandwidth). Key in:

REFERENCE LEVEL	.....	-15 dBm
FREQUENCY SPAN	.....	0 Hz
VIDEO BW	.....	30 Hz
RES BW	.....	300 kHz

PERFORMANCE TESTS

4-35. GAIN COMPRESSION TEST (Cont'd)

20. Press MARKER , .
21. Connect cable to power sensor and adjust synthesizer level for a power meter reading of $-15.00 \text{ dBm} \pm 0.02 \text{ dB}$. Reconnect cable to analyzer.
22. Change to -5 dBm . Record the MKR Δ amplitude: _____ dB. This is the IF gain error in changing the reference level from -15 dBm to -5 dBm ; 0 dB input attenuation.
23. Set to -15 dBm . Adjust AMPTD CAL to set the trace approximately 1 division down from the reference level.
24. Press MARKER , .
25. Connect the cable to the power sensor and adjust synthesizer level for a power meter indication of $-5.00 \text{ dBm} \pm 0.02 \text{ dB}$. Reconnect cable to analyzer input.
26. Change to -5 dBm . Record the MKR Δ amplitude: _____ dB.
27. Subtract the value recorded in step 22 from the value obtained in step 26 to find the gain compression: _____ dB. The result should be $> -1.0 \text{ dB}$ (less than 1 dB compression).
28. Press on the analyzer. Press , 0 dB .
29. Set synthesizer to 9000.000 MHz . Connect cable from synthesizer to power sensor and adjust synthesizer output level for a power meter reading of $-15.00 \text{ dBm} \pm 0.02 \text{ dB}$. Reconnect cable to analyzer input.
30. Key in the following analyzer settings:

<input type="button" value="CENTER FREQUENCY"/>	9 GHz
<input type="button" value="FREQUENCY SPAN"/>	1 MHz
<input type="button" value="ATTEN"/>	0 dB

31. Press MARKER and wait for the PEAKING! message to disappear from the display.

4-35. GAIN COMPRESSION TEST (Cont'd)

32. Press the SCALE LIN pushbutton, then press (resolution bandwidth). Key in the following:

<input type="button" value="REFERENCE
LEVEL"/>	–15 dBm
<input type="button" value="FREQUENCY
SPAN"/>	0 Hz
<input type="button" value="VIDEO
BW"/>	30 Hz

33. Press MARKER , .
34. Connect cable to power sensor and adjust output level of synthesizer for a power meter indication of $-5.00 \text{ dBm} \pm 0.02 \text{ dB}$. Reconnect cable to analyzer input.
35. Change to -5 dBm . Record the MKR Δ amplitude: _____ dB.
36. Subtract the value recorded in step 22 from the value obtained in step 35 to find the gain compression: _____ dB. The result should be $> -1.0 \text{ dB}$ (less than 1 dB compression).
37. Disconnect cable from analyzer RF INPUT. Connect analyzer CAL OUTPUT to RF INPUT.
38. Press , MARKER . Adjust AMPTD CAL for a MARKER amplitude of $-10.00 \text{ dBm} \pm 0.02 \text{ dB}$.

4-36. 1ST LO OUTPUT AMPLITUDE TEST

SPECIFICATION:

$> +5 \text{ dBm}$ from 2.3 GHz to 6.1 GHz

DESCRIPTION:

The power level at the 1ST LO OUTPUT connector is measured as the first L.O. is swept over its 2.3 GHz to 6.1 GHz range.

4-36. 1ST LO OUTPUT AMPLITUDE TEST (Cont'd)

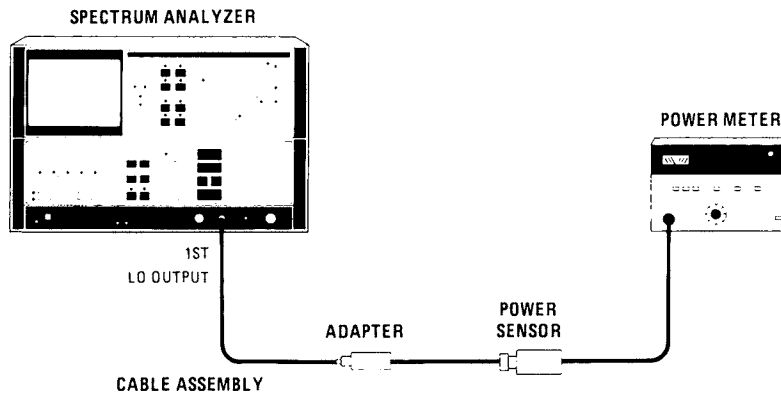


Figure 4-42. 1ST LO OUTPUT Amplitude Test Setup

EQUIPMENT:

Power Meter	HP 436A
Power Sensor	HP 8481A
Adapter, SMA Female to Type N Female	HP 86290-60005
61 cm (24 in.) Cable Assembly, SMA Male	
Connectors	B&W 55-S142-55-24

PROCEDURE:

1. Press 2-22
GHz . Key in a STOP
FREQ of a 5.8 GHz.
2. Set SWEEP
TIME to 100 seconds.
3. Calibrate power meter and sensor. Connect equipment as shown in Figure 4-42.
4. Observe the meter indication as the analyzer sweeps from 2 to 5.8 GHz. The indication should be $> +5$ dBm across the full sweep range.

4-37. SWEEP + TUNE OUT ACCURACY TEST

SPECIFICATION:

$-1\text{V/GHz} \pm 2\% \pm 10\text{ mV}$

DESCRIPTION:

The spectrum analyzer is set to zero frequency span and the SWEEP + TUNE OUT auxiliary output is measured with a voltmeter as the analyzer is tuned across its frequency range.

PERFORMANCE TESTS

4-37. SWEEP + TUNE OUT ACCURACY TEST (Cont'd)

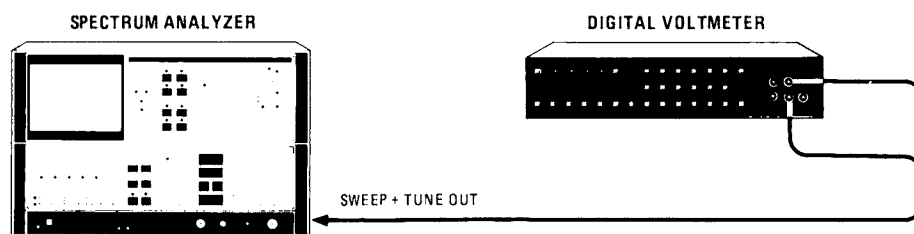


Figure 4-43. SWEEP + TUNE OUT Accuracy Test Setup

EQUIPMENT:

Digital Voltmeter HP 3455A

PROCEDURE:

1. Press **2-32 GHz** on the analyzer. Set **FREQUENCY SPAN** to 0 Hz.
2. Connect digital voltmeter to the SWEEP + TUNE OUT auxiliary output on the rear panel of the analyzer as indicated in Figure 4-43.
3. Set **CENTER FREQUENCY** according to Table 4-24 and record the voltmeter readings in the table. The allowable range for each measurement is shown in the table.

Table 4-24. SWEEP + TUNE OUT Accuracy

<div style="border: 1px solid black; padding: 2px; text-align: center;">CENTER FREQUENCY</div>	Voltmeter Reading (Volts)		
	Min.	Actual	Max.
0 Hz	– 0.010	_____	+ 0.010
1 MHz	– 0.011	_____	+ 0.009
12 MHz	– 0.022	_____	– 0.002
130 MHz	– 0.143	_____	– 0.117
670 MHz	– 0.693	_____	– 0.647
1.3 GHz	– 1.336	_____	– 1.264
5.7 GHz	– 5.824	_____	– 5.576
12.5 GHz	–12.760	_____	–12.240
18.6 GHz	–18.982	_____	–18.218
22 GHz	–22.450	_____	–21.550

Table 4-25. 8566A Performance Test Record

Hewlett-Packard Company Model 8566A Spectrum Analyzer				Tested By _____	
Serial Numbers				Date _____	
IF-Display Section: _____					
RF Section: _____					

Para. No.	Test Description			Results		
				Min.	Measured	Max.
4-16	Frequency Reference Error Test 4. Frequency (initial) 5. Frequency (after 24 hours) 6. Difference between 4 and 5				10. _____ MHz 10. _____ MHz _____ Hz	10 ⁻² Hz
4-17	Center Frequency Readout Accuracy Test 8. CENTER readout					
	REFERENCE LEVEL (dBm)	FREQUENCY SPAN	CENTER FREQUENCY			
	+20	10 kHz	100 MHz	99.999 8 MHz	_____	100.000 2 MHz
	+20	100 kHz	100 MHz	99.998 MHz	_____	100.002 MHz
	+20	1 MHz	100 MHz	99.98 MHz	_____	100.02 MHz
	+20	10 MHz	100 MHz	99.70 MHz	_____	100.3 MHz
	+20	100 MHz	100 MHz	98 MHz	_____	102 MHz
	+20	10 kHz	1 GHz	999.999 8 MHz	_____	1.000 000 2 GHz
	+20	100 kHz	1 GHz	999.998 MHz	_____	1.000 002 GHz
	+20	1 MHz	1 GHz	999.98 MHz	_____	1.000 02 GHz
	+20	10 MHz	1 GHz	999.7 MHz	_____	1.000 3 GHz
	+20	100 MHz	1 GHz	998 MHz	_____	1.002 GHz
	0	10 kHz	4 GHz	3.999 999 8 GHz	_____	4.000 000 2 GHz
	0	100 kHz	4 GHz	3.999 998 GHz	_____	4.000 002 GHz
	0	1 MHz	4 GHz	3.999 98 GHz	_____	4.000 02 GHz
	0	10 MHz	4 GHz	3.999 7 GHz	_____	4.000 3 GHz
	0	100 MHz	4 GHz	3.998 GHz	_____	4.002 GHz
	0	10 kHz	10 GHz	9.999 999 8GHz	_____	10.000 000 2 GHz
	0	100 kHz	10 GHz	9.999 998GHz	_____	10.000 002 GHz
	0	1 MHz	10 GHz	9.999 98 GHz	_____	10.000 02 GHz
	0	10 MHz	10 GHz	9.999 6 GHz	_____	10.000 4 GHz
	0	100 MHz	10 GHz	9.998 GHz	_____	10.002 GHz

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description			Results		
				Min.	Measured	Max.
4-17	Center Frequency Readout Accuracy Test (Cont'd)					
	REFERENCE LEVEL (dBm)	FREQUENCY SPAN	CENTER FREQUENCY			
	-10	10 kHz	15 GHz	14.999 999 8 GHz	_____	15.000 000 2 GHz
	-10	100 kHz	15 GHz	14.999 998 GHz	_____	15.000 002 GHz
	-10	1 MHz	15 GHz	14.999 98 GHz	_____	15.000 02 GHz
	-10	10 MHz	15 GHz	14.999 5 GHz	_____	15.000 5 GHz
	-10	100 MHz	15 GHz	14.998 GHz	_____	15.002 GHz
	-30	10 kHz	20 GHz	19.999 999 8 GHz	_____	20.000 000 2 GHz
	-30	100 kHz	20 GHz	19.999 998 GHz	_____	20.000 002 GHz
	-30	1 MHz	20 GHz	19.999 98 GHz	_____	20.000 02 GHz
	-30	10 MHz	20 GHz	19.999 4 GHz	_____	20.000 6 GHz
	-30	100 MHz	20 GHz	19.998 GHz	_____	20.002 GHz
4-18	Frequency Span Accuracy Test 7. Narrow Span Accuracy					
	FREQUENCY SPAN	CENTER FREQUENCY	RES BW			
	20 kHz	10 kHz	100 Hz	16.84 kHz	_____	17.17 kHz
	50 kHz	25 kHz	300 Hz	29.71 kHz	_____	30.30 kHz
	150 kHz	75 kHz	1 kHz	128.8 kHz	_____	131.3 kHz
	200 kHz	100 kHz	1 kHz	178.3 kHz	_____	181.8 kHz
	1 MHz	500 kHz	3 kHz	793 kHz	_____	808 kHz
	2 MHz	1 MHz	10 kHz	1.783 MHz	_____	1.818 MHz
	6 MHz	3 MHz	10 kHz	3.884 MHz	_____	4.123 MHz
	10 MHz	5 MHz	30 Hz	7.77 MHz	_____	8.24 MHz
	50 MHz	25 MHz	300 kHz	29.13 MHz	_____	30.92 MHz
	100 MHz	50 MHz	300 kHz	77.7 MHz	_____	82.4 MHz
	17. Wide Span Accuracy					
	CENTER FREQUENCY	FREQUENCY SPAN				
	4 GHz	500 MHz		389 MHz	_____	412 MHz
	10 GHz	500 MHz		389 MHz	_____	412 MHz
	15 GHz	500 MHz		389 MHz	_____	412 MHz
	20 GHz	500 MHz		389 MHz	_____	412 MHz

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description		Results		
			Min.	Measured	Max.
4-18	Frequency Span Accuracy Test (Cont'd)				
	<div>CENTER FREQUENCY</div>	<div>FREQUENCY SPAN</div>			
	4 GHz	1 GHz	777 MHz	_____	824 MHz
	10 GHz	1 GHz	777 MHz	_____	824 MHz
	15 GHz	1 GHz	777 MHz	_____	824 MHz
	20 GHz	1 GHz	777 MHz	_____	824 MHz
	10 GHz	5 GHz	3.884 GHz	_____	4.123 GHz
	15 GHz	5 GHz	3.884 GHz	_____	4.123 GHz
	18 GHz	5 GHz	3.884 GHz	_____	4.123 GHz
	10 GHz	10 GHz	7.767 GHz	_____	8.247 GHz
	15 GHz	10 GHz	7.767 GHz	_____	8.247 GHz
4-19	Resolution Bandwidth Accuracy Test 8. Bandwidth Accuracy				
	<div>RES BW</div>	<div>FREQUENCY SPAN</div>			
	3 MHz	5 MHz	2.400 MHz	_____	3.600 MHz
	1 MHz	2 MHz	900 kHz	_____	1.100 MHz
	300 kHz	500 kHz	270.0 kHz	_____	330.0 kHz
	100 kHz	200 kHz	90.0 kHz	_____	110.0 kHz
	30 kHz	50 kHz	27.00 kHz	_____	33.00 kHz
	10 kHz	20 kHz	9.00 kHz	_____	11.00 kHz
	3 kHz	5 kHz	2.700 kHz	_____	3.300 kHz
	1 kHz	2 kHz	800 Hz	_____	1.200 kHz
4-20	Resolution Bandwidth Selectivity Test 9. Bandwidth Selectivity Ratio (60 dB BW/3dB BW)				
	<div>RES BW</div>	<div>FREQUENCY SPAN</div>	<div>VIDEO BW</div>		
	3 MHz	20 MHz	100 Hz	_____	15:1
	1 MHz	15 MHz	300 Hz	_____	15:1
	300 kHz	5 MHz	AUTO	_____	15:1

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description			Results		
				Min.	Measured	Max.
4-20	Resolution Bandwidth Selectivity Test (Cont'd)					
	9. Bandwidth Selectivity Ratio (60 dB BW3dB BW)(Cont'd)					
	100 kHz	2 MHz	AUTO		_____	15:1
	30 kHz	500 kHz	AUTO		_____	13:1
	10 kHz	200 kHz	AUTO		_____	13:1
	3 kHz	50 kHz	AUTO		_____	11:1
	1 kHz	10 kHz	AUTO		_____	11:1
	300 Hz	5 kHz	AUTO		_____	11:1
	100 Hz	2 kHz	AUTO		_____	11:1
	30 Hz	500 Hz	AUTO		_____	11:1
	10 Hz	100 Hz	AUTO		_____	100 Hz
4-21	Resolution Bandwidth Switching Uncertainty Test					
	6. Bandwidth Switching Uncertainty (Deviation in dB)					
	RES BW		FREQUENCY SPAN			
	1 MHz	5 MHz			0(ref.)	0(ref.)
	3 MHz	5 MHz			_____	± 1.0
	300 kHz	5 MHz			_____	± 0.5
	100 kHz	500 kHz			_____	± 0.5
	30 kHz	500 kHz			_____	± 0.5
	10 kHz	50 kHz			_____	± 0.5
	3 kHz	50 kHz			_____	± 0.5
4-22	Log Scale Switching Uncertainty Test					
	7. Log Scale Switching Uncertainty (Deviation in dB)					
	SCALE (dB / DIV)					
	1				0(ref.)	0(ref.)
	2				_____	± 0.5
	5				_____	± 0.5
	10				_____	± 0.5

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description			Results		
				Min.	Measured	Max.
4-23	IF Gain Uncertainty Test 15. 10 dB Gain Steps (Deviation in dB)					
	<div>REFERENCE LEVEL</div> (dBm)	Step Attenuator Setting (dB)	<div>VIDEO BW</div> (Hz)		Last Column from Table 4-9	
	0	0	100		0(ref.)	
	- 10	10	100		_____	
	- 20	20	100		_____	
	- 30	30	100		_____	
	- 40	40	100		_____	
	- 50	50	100		_____	
	- 60	60	100		_____	
	- 70	70	10		_____	
	- 80	30	100		_____	
	- 90	40	100		_____	
	- 100	50	10		_____	
	- 110	60	10		_____	
	- 120	70	10		_____	
	22. 2 dB Gain Steps (Deviation in dB)					
	<div>REFERENCE LEVEL</div> (dBm)	Step Attenuator Setting (dB)			Last Column from Table 4-10	
	- 1.9	0			0(ref.)	
	- 3.9	2			_____	
	- 5.9	4			_____	
	- 7.9	6			_____	
	- 9.9	8			_____	
	29. 0.1 dB Gain Steps (Deviation in dB)					
	<div>REFERENCE LEVEL</div> (dBm)				Last Column from Table 4-11	
	0.0				0.00(ref.)	
	- 0.1				_____	
	- 0.2				_____	
	- 0.3				_____	
	- 0.4				_____	
	- 0.5				_____	
	- 0.6				_____	
	- 0.7				_____	
	- 0.8				_____	

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description	Results		
		Min.	Measured	Max.
4-23	IF Gain Uncertainty Test (Cont'd) 29. 0.1 dB Gain Steps (Deviation in dB)(Cont'd)			
	– 0.9		_____	
	– 1.0		_____	
	– 1.1		_____	
	– 1.2		_____	
	– 1.3		_____	
	– 1.4		_____	
	– 1.5		_____	
	– 1.6		_____	
	– 1.7		_____	
	– 1.8		_____	
	– 1.9		_____	
	30. Recorded deviations of Step 15 for – 80 to – 120 dBm $\leq \pm 0.4$ dB		<input type="checkbox"/> YES	
	31. Recorded deviations from Step 15. Largest Positive 0 to – 70 dBm Largest Negative 0 to – 70 dBm Largest Positive – 80 to – 120 dBm Largest Negative – 80 to – 120 dBm		_____ _____ _____ _____	
	32. Recorded deviation from Steps 22 and 29. Largest Positive Step 22 Largest Negative Step 22 Largest Positive Step 29 Largest Negative Step 29		_____ _____ _____ _____	
	33. Sum of Positive Deviations of Steps 31 and 32.		_____	0.6 dB
	34. Sum of Negative Deviations of Steps 31 and 32	– 0.6 dB	_____	
4-24	Scale Fidelity Test 9. Log Scale Fidelity Error			
	Step Attenuator Setting (dB)		Last Column from Table 4-13	
	0		0(ref.)	
	10		_____	± 0.1 dB
	20		_____	± 0.1 dB
	30		_____	± 0.1 dB

Table 4-25. 8566A Performance Test Record

Para. No.	Test Description	Results		
		Min.	Measured	Max.
4-24	Scale Fidelity Test (Cont'd)			
	40		_____	± 1.0 dB
	50		_____	± 1.0 dB
	60		_____	± 1.0 dB
	70		_____	± 1.0 dB
	80		_____	± 1.0 dB
	90		_____	± 1.0 dB
	20. Linear Scale Fidelity Error			
	Step Attenuator Setting (dB)			
	10	– 10.87	_____	– 9.21
4-25	20	– 23.10	_____	– 17.72
	Calibrator Amplitude Accuracy Test 2. CAL OUTPUT level	– 10.3 dB	_____	– 9.7 dB
4-26	Frequency Response 12. Deviation 1 to 100 kHz		_____	1.2 dB
	18. Signal level at:			
	100Hz	– 1.4 dB	_____	– 2.6 dB
	200 Hz	– 1.4 dB	_____	– 2.6 dB
	300 Hz	– 1.4 dB	_____	– 2.6 dB
	400 Hz	– 1.4 dB	_____	– 2.6 dB
	500 Hz	– 1.4 dB	_____	– 2.6 dB
	600 Hz	– 1.4 dB	_____	– 2.6 dB
	700 Hz	– 1.4 dB	_____	– 2.6 dB
	800 Hz	– 1.4 dB	_____	– 2.6 dB
	900 Hz	– 1.4 dB	_____	– 2.6 dB
	1 kHz	– 1.4 dB	_____	– 2.6 dB
	25. Deviation 100 kHz to 10 MHz		_____	1.2 dB
	36. Deviation 10 MHz to 2.5 GHz (Last Column of Table 4-15)		_____	1.2 dB
	59. Deviation 2 to 18 GHz 2.6 to 12.5 GHz		_____	± 1.7 dB
	12.5 to 18 GHz		_____	± 2.2 dB
	67. Deviation 18 to 20 GHz		_____	± 2.2 dB
	Deviation 20 to 22 GHz		_____	± 3.0 dB

Table 4-25. 8566A Performance Test Record (Cont'd)




Para. No.	Test Description			Results		
				Min.	Measured	Max.
4-27	Sweep Time Accuracy Test 13. Sweep Times ≥ 20 msec					
		TIME MARK SELECT	Comb Lines			
	20 msec	2 msec	1st and 9th	14.40 msec	_____	17.60 msec
	30 msec	5 msec	1st and 5th	18.00 msec	_____	22.00 msec
	50 msec	5 msec	1st and 9th	36.00 msec	_____	44.00 msec
	70 msec	10 msec	1st and 6th	45.00 msec	_____	55.00 msec
	90 msec	10 msec	1st and 8th	63.00 msec	_____	77.00 msec
	110 msec	10 msec	1st and 9th	72.00 msec	_____	88.00 msec
	170 msec	20 msec	1st and 7th	108.0 msec	_____	132.0 msec
	200 msec	20 msec	1st and 9th	144.0 msec	_____	176.0 msec
	2 sec	0.2 sec	1st and 9th	1.440 sec	_____	1.760 sec
	20 sec	2 sec	1st and 9th	14.40 sec	_____	17.60 sec
	200 sec	10 sec	1st and 8th	153.0 sec	_____	187.0 sec
	17. Sweep Times < 20 msec					
						
	2 msec				_____	
	1 msec				_____	
	200 μ sec				_____	
	100 μ sec				_____	
4-28	Sweep Time Accuracy Test (Alternate Procedure) 15. Measured Sweep Times, 100 μ sec to 10 sec. (Counter indication x 10.)					
		FUNCTION GENERATOR FREQUENCY				
	100 μ sec	100 kHz		90 μ sec	_____	110 μ sec
	200 μ sec	50 kHz		180 μ sec	_____	220 μ sec
	1 msec	10 kHz		900 μ sec	_____	1.1 msec
	2 msec	5 kHz		1.8 msec	_____	2.2 msec
	5 msec	2 kHz		4.5 msec	_____	5.5 msec
	10 msec	1 kHz		9 msec	_____	11 msec
	20 msec	500 Hz		18 msec	_____	22 msec
	50 msec	200 Hz		45 msec	_____	55 msec
	100 msec	100 Hz		90 msec	_____	110 msec
	500 msec	20 Hz		450 msec	_____	550 msec
	1 sec	10 Hz		900 msec	_____	1.1 msec
	2 sec	5 Hz		1.8 sec	_____	2.2 sec
	5 sec	2 Hz		4.5 sec	_____	5.5 sec
	10 sec	1 Hz		9 sec	_____	11 sec

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description	Results		
		Min.	Measured	Max.
4-29	Noise Sidebands Test			
	11. Noise Sideband Level 320 Hz offset		_____	– 80 dBc
	16. Noise Sideband Level 1 kHz offset		_____	– 85 dBc
	21. Noise Sideband Level 10 kHz offset		_____	– 90 dBc
	26. Noise Sideband Level 100 kHz offset		_____	– 105 dBc
4-30	Line Related Sidebands Test			
	11. Line Related Sideband Levels for 100 MHz signal			
	Largest level < 360 Hz away from signal		__dB at __Hz	– 70 dB
	Largest level 360 to 600 Hz away from signal		__dB at __Hz	– 75 dB
	15. Line Related Sideband Levels for 2.4 GHz signal			
	Largest level < 360 Hz away from signal		__dB at __Hz	– 60 dB
	Largest level 360 to 600 Hz away from signal		__dB at __Hz	– 75 dB
	20. Line Related Sideband Levels for 2.6 GHz signal			
	Largest level < 360 Hz away from signal		__dB at __Hz	– 60 dB
	Largest level 360 to 600 Hz away from signal		__dB at __Hz	– 75 dB
	25. Line Related Sideband Levels for 5.7 GHz signal			
	Largest level < 360 Hz away from signal		__dB at __Hz	– 60 dB
	Largest level 360 to 600 Hz away from signal		__dB at __Hz	– 75 dB
	Option 400			
	11. Line Related Sideband Levels for Option 400			
	Levels for Option 400 for 5.7 GHz signal			
	Largest level < 2 kHz away from signal		__dB at __Hz	– 55 dB
	Largest level 2 kHz to 5.5 kHz away from signal		__dB at __Hz	– 65 dB
	Level at 5600 Hz away from signal		_____	– 75 dB

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description	Results		
		Min.	Measured	Max.
4-31	Average Noise Level Test 11. Average Noise Level			
	<div style="border: 1px solid black; border-radius: 10px; padding: 2px; display: inline-block;">CENTER FREQUENCY</div>			
	1 MHz		_____	– 137 dBm
	1 GHz		_____	– 137 dBm
	2.499 GHz		_____	– 135 dBm
	2.510 GHz		_____	– 134 dBm
	5.799 GHz		_____	– 134 dBm
	5.810 GHz		_____	– 127 dBm
	12.499 GHz		_____	– 127 dBm
	12.510 GHz		_____	– 120 dBm
	18.59 GHz		_____	– 120 dBm
	18.61 GHz		_____	– 115 dBm
	22.0 GHz		_____	– 115 dBm
4-32	Residual Responses Test 8. Residual Responses 0 Hz to 1.5 GHz Largest Residual Level		____dBm at ____GHz	– 100 dBm
	11. Residual Responses 1.4 to 2.5 GHz Largest Residual Level		____dBm at ____GHz	– 100 dBm
	13. Residual Responses 2.4 to 5.8 GHz Largest Residual Level		____dBm at ____GHz	– 100 dBm
	15. Residual Responses 5.7 to 6.7 GHz Largest Residual Level		____dBm at ____GHz	– 95 dBm
	16. Residual Responses 6.690 to 11.650 GHz Largest Residual Level		____dBm at ____GHz	– 95 dBm
	18. Residual Responses 11.6 to 12.5 GHz Largest Residual Level		____dBm at ____GHz	– 95 dBm
	21. Residual Responses 12.4 to 18.6 GHz Largest Residual Level		____dBm at ____GHz	– 85 dBm
	24. Residual Responses 18.5 to 22 GHz Largest Residual Level		____dBm at ____GHz	– 80 dBm
4-33	Harmonic and Intermodulation Distortion Test 8. Second Harmonic Level of 230 MHz		_____	– 80 dBc
	15. Second Harmonic Level of 800 MHz		_____	– 70 dBc
	25. Second Harmonic Level of 7200 MHz		_____	– 100 dBc

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description	Results		
		Min.	Measured	Max.
4-33	Harmonic and Intermodulation Distortion Test (Con't)			
	40. TOI for signals of 2099.5 and 2100.5 MHz	+ 7 dBm	_____	
	54. TOI for signals of 3999.5 and 4000.5 MHz	+ 7 dBm	_____	
	55. TOI for signals of 8999.5 and 9000.5 MHz	+ 5 dBm	_____	
	TOI for signals of 13999.500 and 14000.499	+ 5 dBm	_____	
4-34	Image, Multiple, and Out-of-Band Responses Test 9/10. Spurious Responses			
	<div>CENTER FREQUENCY</div> (GHz)	Input Signal Frequency (MHz)		
	3	3642.800	_____	– 70 dBm
		6321.400	_____	– 60 dBm
		6964.200	_____	– 60 dBm
	6	2517.900	_____	– 60 dBm
		3160.700	_____	– 60 dBm
		5357.200	_____	– 70 dBm
	9	4017.900	_____	– 60 dBm
		4660.700	_____	– 60 dBm
		8357.200	_____	– 70 dBm
		12696.500	_____	– 60 dBm
		13339.300	_____	– 60 dBm
	12	5517.900	_____	– 60 dBm
		6160.700	_____	– 60 dBm
		11357.200	_____	– 70 dBm
		17196.500	_____	– 60 dBm
		17839.300	_____	– 60 dBm
	15	4571.500	_____	– 60 dBm
		5214.300	_____	– 60 dBm
		9464.300	_____	– 60 dBm
		10107.100	_____	– 60 dBm
		14357.200	_____	– 70 dBm
	17	5238.100	_____	– 60 dBm
		5880.900	_____	– 60 dBm
		10797.700	_____	– 60 dBm
		11440.500	_____	– 60 dBm
		16357.200	_____	– 70 dBm

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description		Results		
			Min.	Measured	Max.
4-34	Image, Multiple, and Out-of-Band Responses Test (Cont'd) 9/10. Spurious Responses (Cont'd)				
	<div>CENTER FREQUENCY</div> (GHz)	Input Signal Frequency (MHz)			
	19	4348.300		_____	– 60 dBm
		4991.100		_____	– 60 dBm
		9017.900		_____	– 60 dBm
		9660.700		_____	– 60 dBm
		13687.600		_____	– 60 dBm
		14330.400		_____	– 60 dBm
		18357.200		_____	– 60 dBm
	21	4848.300		_____	– 60 dBm
		5491.100		_____	– 60 dBm
		10017.900		_____	– 60 dBm
		10660.700		_____	– 60 dBm
		15187.600		_____	– 60 dBm
		15830.400		_____	– 60 dBm
		20357.200		_____	– 50 dBm
	18. Multiple Responses				
	<div>CENTER FREQUENCY</div> (Multiple Response) (GHz)	Input Signal Frequency (MHz)			
	2.68930	5700.000		_____	– 70 dBc
	8.107133	12000.000		_____	– 70 dBc
	8.535667			_____	– 70 dBc
	10.107133	15000.000		_____	– 70 dBc
	10.535667			_____	– 70 dBc
4-34	Gain Compression Test 14. Gain Compression for input – 10 to 0 dBm		– 1.0 dB	_____	
	27. Gain Compression for input – 25 to – 15 dBm		– 1.0 dB	_____	
	36. Gain Compression for input – 15 to – 5 dBm		– 1.0 dB	_____	
4-36	1st LO OUTPUT Amplitude Test 4. 1st LO OUTPUT Level		+ 5 dBm	_____	

Table 4-25. 8566A Performance Test Record (Cont'd)

Para. No.	Test Description	Results		
		Min.	Measured	Max.
4-37	SWEEP + TUNE OUT Accuracy Test 3. SWEEP + TUNE OUT Accuracy			
	CENTER FREQUENCY			
	0 Hz	– 0.010 Vdc	_____	+0.010 Vdc
	1 MHz	– 0.011 Vdc	_____	+0.009 Vdc
	12 MHz	– 0.022 Vdc	_____	– 0.002 Vdc
	130 MHz	– 0.143 Vdc	_____	– 0.117 Vdc
	670 MHz	– 0.693 Vdc	_____	– 0.647 Vdc
	1.3 GHz	– 1.336 Vdc	_____	– 1.264 Vdc
	5.7 GHz	– 5.824 Vdc	_____	– 5.576 Vdc
	12.5 GHz	– 12.760 Vdc	_____	– 12.240 Vdc
	18.6 MHz	– 18.982 Vdc	_____	– 18.218 Vdc
	22 GHz	– 22.450 Vdc	_____	– 21.550 Vdc

SECTION V

ADJUSTMENTS

5-1. INTRODUCTION

5-2. This section provides adjustment procedures for the Model 8566A Spectrum Analyzer. These procedures should not be performed as routine maintenance but should be used (1) after replacement of a part or component, or (2) when

performance tests show that the specifications of Table 1-1 cannot be met. Before attempting any adjustment, allow 1 hour warm-up time for the instrument. Table 5-1 is a cross reference of functions adjusted to the related adjustment procedure. Table 5-2 lists all adjustable components by reference designator, name and the function adjusted by each.

Table 5-1. Adjustment Cross Reference

Function Adjusted	Para. No.	Paragraph Title
Low Voltage	5-15	Low Voltage Power Supply Adjustments
High Voltage	5-16	High Voltage Adjustment
CRT Display (Standard)	5-17	Preliminary Display Adjustments
	5-18	Final Display Adjustments
CRT Display (Digital Storage)	5-38	Digital Storage Display Adjustments
IF Gains	5-19	Log Amplifier Adjustments
	5-24	Step Gain and 18.4 MHz Local Oscillator Adjustments
Log Scales	5-20	Video Processor Adjustments
Bandwidth Amplitudes	5-21	3 MHz Bandwidth Filter Adjustments
	5-22	21.4 MHz Bandwidth Filter Adjustments
	5-24	Step Gain and 18.4 MHz Local Oscillator Adjustments
	5-25	Down/Up Converter Adjustments
3-dB Bandwidths	5-23	3-dB Bandwidth Adjustments
10 MHz Internal Time Base	5-26	10 MHz Standard Adjustment
CAL OUTPUT Level	5-33	CAL OUTPUT Adjustments
Frequency Span	5-27	Sweep, DAC, and Main Coil Driver Adjustments
START and STOP Frequency	5-27	Sweep, DAC, and Main Coil Driver Adjustments
Sweep Times	5-27	Sweep, DAC, and Main Coil Driver Adjustments
Frequency Tuning	5-27	Sweep, DAC, and Main Coil Driver Adjustments
	5-28	100 MHz Voltage-Controlled Crystal Oscillator Adjustments
	5-29	M/N Loop Adjustments
	5-27	Sweep, DAC, and Main Coil Driver Adjustments
Phase Lock Loops	5-32	RF Module Phase Lock Adjustments
	5-30	YTO Loop Adjustments
	5-31	20/30 Loop Phase Lock Adjustments
RF Signal Conversion and	5-34	Last Converter Adjustments
RF Gains	5-35	Frequency Response Adjustments
Frequency Response	5-35	Frequency Response Adjustments
Digital Storage Video	5-36	Analog-to-Digital Converter Adjustments
Processing	5-37	Track and Hold Adjustments

5-3. EQUIPMENT REQUIRED

5-4. Table 1-4 lists the equipment required for the adjustment procedures. If the test equipment recommended is not available, other equipment may be used if its performance meets the "Critical Specifications" listed in the table. The test setup used for an adjustment procedure is referenced in each procedure.

5-5. ADJUSTMENT TOOLS

5-6. For adjustments requiring a non-metallic tuning tool, use fiber tuning tool, HP Part Number 8710-0033. In situations not requiring non-metallic tuning tools, an ordinary small screwdriver or other suitable tool is sufficient. However, use of a non-metallic adjustment tool whenever possible is recommended. Never try to force any adjustment control in the analyzer. This is especially critical when tuning variable slug-tuned inductors and variable capacitors.

5-7. FACTORY SELECTED COMPONENTS

5-8. Factory selected components are identified with an asterisk on the schematic diagram. The range of their values and functions are listed in Table 5-3. Part Numbers for selected values are located in Table 5-4.

5-9. RELATED ADJUSTMENTS

5-10. Any adjustments which interact with or are related to other adjustments are indicated in the adjustment procedures. It is important that adjustments so noted are performed in the order indicated to ensure instrument meets specifications.

5-11. LOCATION OF TEST POINTS AND ADJUSTMENTS

5-12. Illustrations showing the locations of assemblies containing adjustments and locations

of those adjustments within the assemblies are contained within the adjustment procedures where they apply. Also, major assembly and component location illustrations are located at the rear of Volumes 2, 3, and 4 of this manual.

5-13. SAFETY CONSIDERATIONS

5-14. Although this instrument has been designed in accordance with international safety standards, this manual contains information, cautions, and warnings which must be followed to ensure safe operation and to retain the instrument in safe condition. Service and adjustments should be performed only by qualified service personnel.

WARNING

Adjustments in this section are performed with power supplied to the instrument while protective covers are removed. There are voltages at many points in the instrument which can, if contacted, cause personal injury. Be extremely careful. Adjustments should be performed only by trained service personnel.

Power is still applied to this instrument with the LINE switch in STANDBY. There is no OFF position on the LINE switch. Before removing or installing any assembly or printed circuit board, remove the power cord from the rear of both instruments.

Capacitors inside the instrument may still be charged, even if the instrument has been disconnected from its source of supply.

Use a non-metallic adjustment tool whenever possible.

Table 5-2. Adjustable Components in Alpha-Numeric Order (1 of 6)

Reference Designator	Adjustment Name	Adjustment Paragraph Number	Adjustment Function
A1A2C10	C10	5-17	Adjusts rise and fall times of Z axis amplifier pulse
A1A2R5	INTENSITY GAIN	5-17	Sets adjustment range of front-panel INTENSITY control
A1A2R22	HF GAIN	5-17	Adjusts rise and fall times of Z axis amplifier pulse
A1A2R30	FOCUS GAIN	5-17 & 5-18	Adjusts for optimum focus of CRT display
A1A2R31	ORTHO	5-17	Sets orthogonality of CRT
A1A2R32	PATTERN	5-17	Adjusts for optimum rectangular shape of CRT display
A1A2R35	INTENSITY LIMIT	5-17	Sets adjustment range of front-panel INTENSITY control
A1A2R36	ASTIG	5-17	Adjusts astigmatism of CRT
A1A3R14	FOCUS LIMIT	5-17	Coarse adjusts CRT focus
A1A4C10	C10	5-17	Adjusts rise and fall times of X deflection amplifier pulse
A1A4C11	C11	5-17	Adjusts rise and fall times of X deflection amplifier pulse
A1A4R7	X POSN	5-17 & 5-18	Adjusts horizontal position of trace
A1A4R27	X GAIN	5-17 & 5-18	Adjusts horizontal gain of trace
A1A4R28	HF GAIN	5-17	Adjusts rise and fall times of X deflection amplifier pulse
A1A5C10	C10	5-17	Adjusts rise and fall times of Y deflection amplifier pulse
A1A5C11	C11	5-17	Adjusts rise and fall times of Y deflection amplifier pulse
A1A5R7	Y POSN	5-17 & 5-18	Adjusts vertical position of trace
A1A5R27	Y GAIN	5-17 & 5-18	Adjusts vertical gain of trace
A1A5R28	HF GAIN	5-17	Adjusts rise and fall times of Y deflection amplifier pulse
A1A6R9	+15V ADJ	5-15	Adjusts +15 Vdc supply voltage
A1A6R32	HV ADJUST	5-17	Adjusts CRT high voltage
A3A1R34	SWEEP OFFSET	5-38	Adjusts digital sweep to begin at left edge of graticule
A3A2R12	LL THRESH	5-38	Adjusts point at which graticule lines switch from short to long lines
A3A2R50	X S&H	5-38	Adjusts horizontal sample and hold pulse
A3A2R51	Y S&H	5-38	Adjusts vertical sample and hold pulse
A3A3R1	X EXP	5-38	Adjusts horizontal position of annotation
A3A3R2	Y EXP	5-38	Adjusts vertical position of annotation
A3A3R4	X GAIN	5-38	Adjusts horizontal gain of graticule lines
A3A3R5	Y GAIN	5-38	Adjusts vertical gain of graticule lines
A3A3R6	XLL	5-38	Adjusts horizontal long lines on graticule information
A3A3R7	XSL	5-38	Adjusts horizontal short lines on graticule information
A3A3R8	YSL	5-38	Adjusts vertical short lines on graticule information
A3A3R9	YLL	5-38	Adjusts vertical long lines on graticule information
A3A3R43	YOS	5-38	Adjusts bottom line of graticule to align with fast sweep signal
A3A8R9	FS	5-36	Adjusts high-end of digitized sweep

Table 5-2. Adjustable Components in Alpha-Numeric Order (2 of 6)

Reference Designator	Adjustment Name	Adjustment Paragraph Number	Adjustment Function
A3A8R14	ZERO	5-36	Adjusts low-end of digitized sweep
A3A9R19	GS	5-37	Adjusts gain for sample mode
A3A9R36	OSN	5-37	Adjusts offset of negative peak detect mode
A3A9R39	GP	5-37	Adjusts gain for positive peak detect mode
A3A9R44	OSP	5-37	Adjusts offset of positive peak detect mode
A3A9R52	GN	5-37	Adjusts gain for negative peak detect mode
A3A9R57	G	5-37	Adjusts overall gain of track and hold
A3A9R59	OS	5-37	Adjusts overall offset of track and hold
A4A1R2	LG OS	5-20	Adjusts linear gain offsets
A4A1R14	OS	5-20	Adjusts Video Processor offset
A4A1R32	ZERO	5-20	Adjusts low-end of Video Processor sweep
A4A2R14	LG20	5-19	Adjusts 20-dB linear gain step
A4A2R61	-12 VTV	5-19	Adjusts Log Amplifier tuning voltage
A4A2R79	ZERO	5-19	Adjusts Log Amplifier offset
A4A3C55	CTR	5-19	Adjusts Log Amplifier center to IF
A4A3R67	AMPTD	5-19	Adjusts amplitude of Log Amplifier Bandpass Filter
A4A3R83	LG10	5-19	Adjusts 10-dB linear gain step
A4A4C9	SYM	5-22	Centers A4A4 Bandwidth Filter crystal pole #1 symmetry
A4A4C19	LC CTR	5-22	Centers A4A4 Bandwidth Filter LC pole #1
A4A4C20	CTR	5-22	Centers A4A4 Bandwidth Filter crystal pole #1
A4A4C39	SYM	5-22	Adjusts A4A4 Bandwidth Filter crystal pole #2 symmetry
A4A4C41	LC DIP	5-22	Dips A4A4 Bandwidth Filter LC pole #1
A4A4C43	LC DIP	5-22	Dips A4A4 Bandwidth Filter LC pole #2
A4A4C65	SYM	5-22	Adjusts A4A4 Bandwidth Filter crystal pole #3 symmetry
A4A4C67	LC CTR	5-22	Centers A4A4 Bandwidth Filter LC pole #2
A4A4C73	CTR	5-22	Centers A4A4 Bandwidth Filter crystal pole #3
A4A4C74	CTR	5-22	Centers A4A4 Bandwidth Filter crystal pole #2
A4A4R43	LC	5-22	Adjusts LC filter amplitudes
A4A4R49	XTAL	5-22	Adjusts crystal filter amplitudes
A4A5C10	FREQ ZERO COARSE	5-24	Coarse adjusts 18.4 MHz Local Oscillator to set adjustment range of front-panel FREQ ZERO control
A4A5R2	+10 V ADJ	5-24	Adjusts +10V Temperature Compensation Supply
A4A5R32	SG10	5-24	Adjusts 10-dB step gain
A4A5R33	CAL	5-24	Adjusts IF gain
A4A5R44	SG20-1	5-24	Adjusts first 20-dB step gain
A4A5R51	VR	5-24	Adjusts variable step gain
A4A5R54	SG20-2	5-24	Adjusts second 20-dB step gain

Table 5-2. Adjustable Components in Alpha-Numeric Order (3 of 6)

Reference Designator	Adjustment Name	Adjustment Paragraph Number	Adjustment Function
A4A6A1C31	18.4 MHz NULL	5-24	Nulls 18.4 MHz Local Oscillator signal
A4A6A1R29	WIDE GAIN	5-25	Adjusts gain of down/up converter
A4A7C6	SYM	5-21	Adjusts 3 MHz Bandwidth Filter pole #1 symmetry
A4A7C7	CTR	5-21	Centers 3 MHz Bandwidth Filter pole #1
A4A7C13	PK	5-21	Peaks 3 MHz Bandwidth Filter pole #2
A4A7C14	SYM	5-21	Adjusts 3 MHz Bandwidth Filter pole #2 symmetry
A4A7C15	CTR	5-21	Centers 3 MHz Bandwidth Filter pole #2
A4A7C22	PK	5-21	Peaks 3 MHz Bandwidth Filter pole #3
A4A7C23	SYM	5-21	Adjusts 3 MHz Bandwidth Filter pole #3 symmetry
A4A7C24	CTR	5-21	Centers 3 MHz Bandwidth Filter pole #3
A4A7C31	PK	5-21	Peaks 3 MHz Bandwidth Filter pole #4
A4A7C32	SYM	5-21	Adjusts 3 MHz Bandwidth Filter pole #4 symmetry
A4A7C33	CTR	5-21	Centers 3 MHz Bandwidth Filter pole #4
A4A7C40	PK	5-21	Peaks 3 MHz Bandwidth Filter pole #5
A4A7C41	SYM	5-21	Adjusts 3 MHz Bandwidth Filter pole #5 symmetry
A4A7C42	CTR	5-21	Centers 3 MHz Bandwidth Filter pole #5
A4A7R30/ A4A7R41	10 Hz AMPTD	5-21	Adjusts 3 MHz Bandwidth Filter 10 Hz bandwidth amplitude
A4A8C13	SYM	5-22	Adjusts A4A8Bandwidth Filter crystal pole #1 symmetry
A4A8C29	CTR	5-22	Centers A4A8 Bandwidth Filter crystal pole #1
A4A8C32	LC CTR	5-22	Centers A4A8 Bandwidth Filter LC pole #1
A4A8C42	SYM	5-22	Adjusts A4A8 Bandwidth Filter crystal pole #2 symmetry
A4A8C44	CTR	5-22	Centers A4A8 Bandwidth Filter crystal pole #2
A4A8C46	LC CTR	5-22	Centers A4A8 Bandwidth Filter LC pole #2
A4A8C66	LC DIP	5-22	Dips A4A8 Bandwidth Filter LC pole #1
A4A8C67	LC DIP	5-22	Dips A4A8 Bandwidth Filter LC pole #2
A4A8R6	A20 dB	5-22	Adjusts attenuation of 21.4 MHz Bandwidth Filter 20-dB step
A4A8R7	A10 dB	5-22	Adjusts attenuation of 21.4 MHz Bandwidth Filter 10-dB step
A4A8R35	LC	5-22	Adjusts LC filter amplitudes
A4A8R40	XTAL	5-22	Adjusts crystal filter amplitudes
A4A9R60	3 MHz	5-23	Adjusts 3 MHz bandwidth
A4A9R61	1 MHz	5-23	Adjusts 1 MHz bandwidth
A4A9R62	300 kHz	5-23	Adjusts 300 kHz bandwidth
A4A9R65	10 kHz	5-23	Adjusts 10 kHz bandwidth
A4A9R66	3 kHz	5-23	Adjusts 3 kHz bandwidth

Table 5-2. Adjustable Components in Alpha-Numeric Order (4 of 6)

Reference Designator	Adjustment Name	Adjustment Paragraph Number	Adjustment Function
A6A3A1C8	C8	5-34	Adjusts 321.4 MHz Band-Pass Filter
A6A3A1C9	C9	5-34	Adjusts 321.4 MHz Band-Pass Filter
A6A3A1C10	C10	5-34	Adjusts 321.4 MHz Band-Pass Filter
A6A3A1C11	C11	5-34	Adjusts 321.4 MHz Band-Pass Filter
A6A3A1C12	C12	5-34	Adjusts 321.4 MHz Band-Pass Filter
A6A3A1C23	10.7 MHz NOTCH	5-34	Adjusts 10.7 MHz Notch Filter
A6A9A1C5	OUTPUT MATCH	5-32	Adjusts for maximum 300 MHz output
A6A9A1C9	BPF	5-32	Adjusts for maximum 300 MHz output
A6A9A1C13	TRIPLER MATCH	5-32	Adjusts for maximum 300 MHz output
A6A9A1C43	SAMPLER MATCH	5-32	Adjusts for maximum sampler output
A6A9A1R20	CAL OUTPUT	5-33	Adjusts output level of CAL OUTPUT
A6A9A1R39	BALANCE	5-35	Adjusts Phase Lock tune voltage level
A6A10R1	IO	5-35	Adjusts 3.3 GHz oscillator drive current
A6A10R9	VE	5-35	Adjusts mixer bias 18.6–22 GHz
A6A10R12	VD	5-35	Adjusts mixer bias 12.5–18.6 GHz
A6A10R15	VC	5-35	Adjusts mixer bias 5.8–12.5 GHz
A6A10R18	VB	5-35	Adjusts mixer bias 2–5.8 GHz
A6A10R21	GA	5-35	Adjusts IF gain .01–2.5 GHz
A6A10R23	GB	5-35	Adjusts IF gain 2–5.8 GHz
A6A10R25	GC	5-35	Adjusts IF gain 5.8–12.5 GHz
A6A10R27	GD	5-35	Adjusts IF gain 12.5–18.6 GHz
A6A10R29	GE	5-35	Adjusts IF gain 18.6–22 GHz
A6A10R31	LR1	5-35	Adjusts linearity 5.8–12.5 GHz (high-end)
A6A10R34	LR2	5-35	Adjusts linearity 12.5–18.6 GHz (low-end)
A6A10R37	LR3	5-35	Adjusts linearity 12.5–18.6 GHz (high-end)
A6A10R40	LB1	5-35	Adjusts linearity 5.8–12.5 GHz
A6A10R41	LB2	5-35	Adjusts linearity 12.5–18.6 GHz (low-end)
A6A10R42	LB3	5-35	Adjusts linearity 12.5–18.6 GHz (high-end)
A6A10R70	LB4	5-35	Adjusts linearity 18.6–22 GHz
A6A10R76	LR4	5-35	Adjusts linearity 18.6–22 GHz (high-end)
A6A11R48	A1	5-35	Adjusts flatness .01–2.5 GHz (low-end)
A6A11R51	B1	5-35	Adjusts flatness 2–5.8 GHz (low-end)
A6A11R54	C1	5-35	Adjusts flatness 5.8–12.5 (low-end)
A6A11R57	D1	5-35	Adjusts flatness 12.5–18.6 GHz (low-end)
A6A11R60	E1	5-35	Adjusts flatness 18.6–22 GHz (low-end)
A6A11R66	A2	5-35	Adjusts flatness .01–2.5 GHz (high-end)

Table 5-2. Adjustable Components in Alpha-Numeric Order (5 of 6)

Reference Designator	Adjustment Name	Adjustment Paragraph Number	Adjustment Function
A6A11R69	B2	5-35	Adjusts flantess 2–5.8 GHz (high-end)
A6A11R72	C2	5-35	Adjusts flantess 5.8–12.5 GHz (high-end)
A6A11R75	D2	5-35	Adjusts flatness 12.5–18.6 GHz (high-end)
A6A11R78	E2	5-35	Adjusts flatness 18.6–22 GHz (high-end)
A6A11R84	GAIN	5-35	Adjusts overall slope gain
A6A12R24	D3	5-35	Adjusts auto-sweep tracking
A6A12R25	D2	5-35	Adjusts auto-sweep tracking
A6A12R26	D1	5-35	Adjusts auto-sweep tracking
A6A12R63	5.8 GHz	5-35	Adjusts tracking at 5.8 GHz (2–5.8)
A6A12R66	2 GHz	5-35	Adjusts tracking at 2 GHz (2–5.8)
A6A12R82	E	5-35	Adjusts tracking at 18.6 GHz (18.6–22)
A6A12R83	D	5-35	Adjusts tracking at 12.5 GHz (12.5–18.6)
A6A12R84	C	5-35	Adjusts tracking at 5.8 GHz (5.8–12.5)
A6A12R85	B	5-35	Adjusts tracking at 4 GHz (2–5.8)
A6A12R98	ZERO	5-35	Sets SWEEP + TUNE OUT zero indication
A6A12R113	–9V	5-35	Sets –9V and +9V dc reference supplies
A7A2C1	400 MHz OUT	5-28	Peaks 400 MHz output signal
A7A2C2	400 MHz OUT	5-28	Peaks 400 MHz output signal
A7A2C3	400 MHz OUT	5-28	Peaks 400 MHz output signal
A7A2C4	100 MHz	5-28	Adjusts VCXO frequency
A7A4A1A1C1	FREQ ADJUST	5-29	Adjusts VCO frequency
A7A4A1A1C5	PWR ADJUST	5-29	Adjusts VCO output level
A8R2	+22V ADJUST	5-15	Sets +22 Vdc supply voltage
A10A1L7	50 kHz NULL	5-31	Nulls 50 kHz output
A10A1L8	50 kHz NULL	5-31	Nulls 50 kHz output
A10A3L11	165 MHz NULL	5-31	Nulls signal at 165 MHz
A10A3L12	160 MHz NULL	5-31	Nulls signal at 160 MHz
A10A3L13	170 MHz NULL	5-31	Nulls signal at 170 MHz
A10A4C50	160 MHz PEAK	5-31	Peaks 160 MHz output signal
A10A4L11	VCO ADJ	5-31	Adjusts PLL3 VCO frequency
A10A4L16	160 MHz PEAK	5-31	Peaks 160 MHz output signal
A10A4L17	160 MHz PEAK	5-31	Peaks 160 MHz output signal
A10A5R2	150 MHz ADJ	5-31	Adjusts VCO TUNE voltage at 150 MHz
A10A5R4	100 MHz ADJ	5-31	Adjusts VCO TUNE voltage at 100 MHz
A10A8R4	.2 MHz	5-31	Sets discriminator pretune at .2 MHz
A10A8R9	.3 MHz	5-31	Sets discriminator pretune at .3 MHz

Table 5-2. Adjustable Components in Alpha-Numeric Order (6 of 6)

Reference Designator	Adjustment Name	Adjustment Paragraph Number	Adjustment Function
A10A8R25	.5 MHz SCAN	5-31	Adjusts frequency span accuracy (20/30 sweep)
A10A8R27	5 MHz SCAN	5-31	Adjusts frequency span accuracy (20/30 sweep)
A11A5C1	IMPEDANCE MATCH	5-30	Optimizes sampler output
A11A5C2	IMPEDANCE MATCH	5-30	Optimizes sampler output
A11A5R1	IF GAIN	5-27	Adjusts level of 30 MHz output
A16R67	SWEEPTIME	5-27	Adjusts time of sweep ramp
A16R68	AUX	5-27	Adjusts AUX OUT sweep ramp
A16R71	GAIN 2	5-27	Adjusts frequency span accuracy (YTO sweep)
A16R72	GAIN 1	5-27	Adjusts frequency span accuracy (YTO sweep)
A16R74	OFFSET	5-27	Adjusts Scan Reset Offset
A16R75	OFFSET	5-27	Adjusts Scan Scaling DAC Offset
A16R76	OFFSET	5-27	Adjusts Integer Number Attenuator Offset
A17R50	+20V ADJ	5-15	Adjusts +20 Vdc Supply voltage
A19R2	AV	5-27	Adjusts VTO Pretune DAC high end (6.20 Hz)
A19R5	DC	5-27	Adjusts VTO Pretune DAC low end (2 GHz)
A19R19	OFFSET ADJ	5-27	Adjusts Summing Amplifier Offset
A19R32	2.5 GHz SPAN	5-27	Adjusts 5.8 GHz switchpoint overlap
A19R41	25 GHz SPAN OFFSET	5-27	Adjusts 25 GHz Span Offset
A19R43	25 GHz SPAN	5-27	Adjusts 5.8 and 12.5 GHz switchpoint overlaps
A20R25	6.15 GHz	5-27	Sets high-end frequency of YTO
A20R34	2.3 GHz	5-27	Sets low-end frequency of YTO
A22	COARSE	5-26	Coarse adjusts 10 MHz Standard frequency
A22	FINE	5-26	Fine adjusts 10 MHz Standard frequency

Table 5-3. Factory Selected Components in Alpha-Numeric Order (1 of 4)

Reference Designator	Selection Procedure Paragraph Number	Range of Values (Ω or PF)	Function of Component
A1A2R9	5-17	2.87K–6.19K	Sets intensity level
A3A2R21		10.0K–26.1K	Sets intensity level
A3A3C27		OPEN or 1.0–10.0	Compensates for feedthrough of INTG signal to U1
A3A3C32		OPEN or 1.0–10.0	Compensates for feedthrough of INTG signal to U11
A3A9C15	5-19	620–910	Sets settling time of track and hold buffer
A4A2R18		68.1–178	Sets adjustment range of LG20
A4A2R36		90.0–237	Adjusts overall linear gain
A4A2R62		17.8K–46.4K	Sets adjustment range of ATTEN
A4A2R86	5-19	0–OPEN	Temperature Compensation
A4A2R88		0–OPEN	Temperature Compensation
A4A2R89		0–OPEN	Temperature Compensation
A4A2R96		0–OPEN	Temperature Compensation
A4A2R97		0–OPEN	Temperature Compensation
A4A2R99		0–OPEN	Temperature Compensation
A4A3R15		10.0–82.5	Log Fidelity
A4A3R25		19.6–82.5	Log Fidelity
A4A3R35		10.0–61.9	Log Fidelity
A4A3R47		2.15K–13.3K	Log Fidelity
A4A3R54		51.1–133	Sets adjustment range of LG10
A4A3R66		46.4K–121K	Sets adjustment range of AMPTD
A4A3R74		2.15K–13.3K	Log Fidelity
A4A3R79		21.6K–68.1K	Bandpass Filter Temperature Compensation
A4A3R80		1.0K–2.87K	Bandpass Filter Temperature Compensation
A4A3R81		0–OPEN	Bandpass Filter Temperature Compensation
A4A3C51	5-19	390–680	Adjusts BPF shape in wide bandwidths (>100 kHz)
A4A3C52		OPEN or 5.6–15.0	Sets adjustment range of CTR
A4A3C53		91–130	Sets adjustment range of CTR
A4A4R3		0–9.09	Sets XTAL bandwidth amplitudes with respect to LC amplitudes
A4A4R16	5-22	3.16K–8.25K	Sets adjustment range of LC DIP
A4A4R20		3.83K–9.09K	Adjusts crystal filter bandwidth
A4A4R35		196–348	Sets XTAL bandwidth amplitudes with respect to LC amplitudes
A4A4R40		3.83K–9.09K	Adjusts crystal filter bandwidth
A4A4R42		1K–OPEN	Sets level of +10V Temperature Compensation Supply Voltage

Table 5-3. Factory Selected Components in Alpha-Numeric Order (2 of 4)

Reference Designator	Selection Procedure Paragraph Number	Range of Values (Ω or PF)	Function of Component
A4A4R44	5-22	1K–OPEN	Sets level of +10V Temperature Compensation Supply Voltage
A4A4R45		0–100	Adjusts bandwidth shape in 10 kHz BW
A4A4R60		3.16K–8.25K	Sets adjustment range of LC DIP
A4A4R64		8.83K–9.09K	Adjusts crystal filter bandwidth
A4A4R65	5-22	909–2.73K	Adjusts positive feedback
A4A4C10		1.0–8.2	Sets adjustment range of SYM
A4A4C17		91–103	Sets adjustment range of LC CTR
A4A4C38		1.0–8.2	Sets adjustment range of SYM
A4A4C66	5-22	1.0–8.2	Sets adjustment range of SYM
A4A4C70		91–130	Sets adjustment range of LC CTR
A4A5R10		2.37K–6.19K	Sets 18.4 MHz Local Oscillator power
A4A5R62		1.33K–3.48K	Adjusts A8dB step
A4A5R70	5-24	619–1.62K	Adjusts A4dB step
A4A5R86		215–OPEN	Adjusts A2dB step
A4A5C7		9.1–16	Sets adjustment range of FREQ ZERO COARSE
A4A6A2R33		42.2–75.0	Adjusts level of 3 MHz output
A4A7C5	5-21	56–82	Centers First Pole
A4A7C12		56–82	Sets adjustment range of Second Pole PK
A4A7C21		56–82	Sets adjustment range of Third Pole PK
A4A7C30		56–82	Sets adjustment range of Fourth Pole PK
A4A7C39	5-21	56–82	Sets adjustment range of Fifth Pole PK
A4A7C93		1.5–12.0	Centers First Pole
A4A7R12		10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R13		10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R23	5-24	10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R24		10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R34		10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R35		10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R45	5-24	10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R46		10.0K–17.8K	Adjusts crystal filter bandwidth
A4A7R56		7.50K–13.3K	Adjusts crystal filter bandwidth
A4A7R57		7.50K–13.3K	Adjusts crystal filter bandwidth
A4A7R60	5-24	38.3–68.1	Compensates for gain of A4A6A1
A4A7R66		38.3–68.1	Adjusts crystal filter bandwidth

Table 5-3. Factory Selected Components in Alpha-Numeric Order (3 of 4)

Reference Designator	Selection Procedure Paragraph Number	Range of Values (Ω or PF)	Function of Component
A4A7R68		100–178	Adjusts crystal filter bandwidth
A4A7R70		383–681	Adjusts crystal filter bandwidth
A4A7R72		1.47K–2.61K	Adjusts crystal filter bandwidth
A4A7R74		38.3–68.1	Adjusts crystal filter bandwidth
A4A7R76		100–178	Adjusts crystal filter bandwidth
A4A7R78		383–681	Adjusts crystal filter bandwidth
A4A7R80		1.47K–2.61K	Adjusts crystal filter bandwidth
A4A7R82		38.3–68.1	Adjusts crystal filter bandwidth
A4A7R84		100–178	Adjusts crystal filter bandwidth
A4A7R86		383–681	Adjusts crystal filter bandwidth
A4A7R88		1.47K–2.61K	Adjusts crystal filter bandwidth
A4A7R90		3.83–68.1	Adjusts crystal filter bandwidth
A4A7R92		100–178	Adjusts crystal filter bandwidth
A4A7R94		383–681	Adjusts crystal filter bandwidth
A4A7R96		1.47K–2.61K	Adjusts crystal filter bandwidth
A4A7R98		3.83–68.1	Adjusts crystal filter bandwidth
A4A7R100		100–178	Adjusts crystal filter bandwidth
A4A7R102		383–681	Adjusts crystal filter bandwidth
A4A7R104		1.47K–2.61K	Adjusts crystal filter bandwidth
A4A8R24		0–100	Adjusts bandwidth shape in 10 kHz BW
A4A8R26		3.83K–9.09K	Adjusts crystal filter bandwidth
A4A8R29		909–2.37K	Adjusts LC mode feedback
A4A8R30	5-22	1.96K–5.11K	Sets adjustment range of LC DIP
A4A8R52		3.83K–9.09K	Adjusts crystal filter bandwidth
A4A8R55	5-22	3.16K–8.25K	Sets adjustment range of LC DIP
A4A8C14	5-22	1.0–8.2	Sets adjustment range of SYM
A4A8C35	5-22	91–130	Sets adjustment range of LC CTR
A4A8C43	5-22	1.0–8.2	Sets adjustment range of SYM
A4A8C49	5-22	91–130	Sets adjustment range of LC CTR
A4A9R69		196K–348K	Sets 1.4 dB step size
A4A9R70		215K–383K	Sets 1 dB step size
A4A9R71		147K–261K	Sets 1.8 dB step size
A6A9A1R19	5-33	750–909	Centers range of CAL OUTPUT adjustment
A6A11R2		100K–196K	Adjusts Band A breakpoint for best flatness
A6A12C1		.1–.22 uF	Sets YTX delay compensation

Table 5-3. Factory Selected Components in Alpha-Numeric Order (4 of 4)

Reference Designator	Selection Procedure Paragraph Number	Range of Values (Ω or PF)	Function of Component
A6A12C2	Schematic	.1—.22 uF	Sets YTX delay compensation
A7A2C8		8.2—11.0	Sets tuning range of A7A2C4
A7A2L4		.22—.68 uH	Centers the adjustment range of A7A2 around 100 MHz
A7A2R67		110—825	Sets -10 dBm output level of the 400 MHz signal
A7A2R68		6.8—61.9	Sets -10 dBm output level of the 400 MHz signal
A7A2R69		110—825	Sets -10 dBm output level of the 400 MHz signal
A10A3C26		0—15	Selected to minimize mixer distortion
A11A4R24		348—562	Sets YTO Loop gain crossover to 20 ± 2 kHz
A13C22		620—1300	Sets period of μ Processor clock
A13R7		See Replaceable Parts List	Sets VBG for U7 μ Processor
A15C10		62—91	Sets oscillator frequency to $10 \text{ MHz} \pm .75 \text{ MHz}$

Table 5-4. HP Part Numbers of Standard Value Replacement Components (1 of 3)

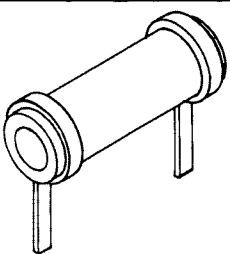
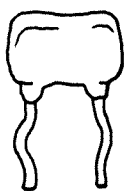
CAPACITORS					
RANGE: 1 to 24 pF TYPE: Tubular TOLERANCE: 1 to 9.1 pF = ± 0.25 pF 10 to 24 pF = $\pm 5\%$			RANGE: 27 to 680 pF TYPE: Dipped Mica TOLERANCE: $\pm 5\%$		
					
Value (pF)	HP Part Number	C D	Value (pF)	HP Part Number	C D
1.0	0160-2236	8	27	0160-2306	3
1.2	0160-2237	9	30	0160-2199	2
1.5	0150-0091	8	33	0160-2150	5
1.8	0160-2239	1	36	0160-2308	5
2.0	0160-2240	4	39	0140-0190	7
2.2	0160-2241	5	43	0160-2200	6
2.4	0160-2242	6	47	0160-2307	4
2.7	0160-2243	7	51	0160-2201	7
3.0	0160-2244	8	56	0140-0191	8
3.3	0150-0059	8	62	0140-0205	5
3.6	0160-2246	0	68	0140-0192	9
3.9	0160-2247	1	75	0160-2202	8
4.3	0160-2248	2	82	0140-0193	0
4.7	0160-2249	3	91	0160-2203	9
5.1	0160-2250	6	100	0160-2204	0
5.6	0160-2251	7	110	0140-0194	1
6.2	0160-2252	8	120	0160-2205	1
6.8	0160-2253	9	130	0140-0195	2
7.5	0160-2254	0	150	0140-0196	3
8.2	0160-2255	1	160	0160-2206	2
9.1	0160-2256	2	180	0140-0197	4
10.0	0160-2257	3	200	0140-0198	5
11.0	0160-2258	4	220	0160-0134	1
12.0	0160-2259	5	240	0140-0199	6
13.0	0160-2260	8	270	0140-0210	2
15.0	0160-2261	9	300	0160-2207	3
16.0	0160-2262	0	330	0160-2208	4
18.0	0160-2263	1	360	0160-2209	5
20.0	0160-2264	2	390	0140-0200	0
22.0	0160-2265	3	430	0160-0939	4
24.0	0160-2266	4	470	0160-3533	0
			510	0160-3534	1
			560	0160-3535	2
			620	0160-3536	3
			680	0160-3537	4

Table 5-4. HP Part Numbers of Standard Value Replacement Components (2 of 3)



RESISTORS								
RANGE: 10 to 464K Ohms TYPE: Fixed-Film WATTAGE: .125 at 125°C TOLERANCE: ±1.0%								
Value (Ω)	HP Part Number	C D	Value (Ω)	HP Part Number	C D	Value (Ω)	HP Part Number	C D
10.0	0757-0346	2	464	0698-0082	7	21.5K	0757-0199	3
11.0	0757-0378	0	511	0757-0416	7	23.7K	0698-3158	4
12.1	0757-0379	1	562	0757-0417	8	26.1K	0698-3159	5
13.3	0698-3427	0	619	0757-0418	9	28.7K	0698-3449	6
14.7	0698-3428	1	681	0757-0419	0	31.6K	0698-3160	8
16.2	0757-0382	6	750	0757-0420	3	34.8K	0757-0123	3
17.8	0757-0294	9	825	0757-0421	4	38.3K	0698-3161	9
19.6	0698-3429	2	909	0757-0422	5	42.2K	0698-3450	9
21.5	0698-3430	5	1.0K	0757-0280	3	46.4K	0698-3162	0
23.7	0698-3431	6	1.1K	0757-0424	7	51.1K	0757-0458	7
26.1	0698-3432	7	1.21K	0757-0274	5	56.2K	0757-0459	8
28.7	0698-3433	8	1.33K	0757-0317	7	61.9K	0757-0460	1
31.6	0757-0180	2	1.47K	0757-1094	9	68.1K	0757-0461	2
34.8	0698-3434	9	1.62K	0757-0428	1	75.0K	0757-0462	3
38.3	0698-3435	0	1.78K	0757-0278	9	82.5K	0757-0463	4
42.2	0757-0316	6	1.96K	0698-0083	8	90.9K	0757-0464	5
46.4	0698-4037	0	2.15K	0698-0084	9	100K	0757-0465	6
51.1	0757-0394	0	2.37K	0698-3150	6	110K	0757-0466	7
56.2	0757-0395	1	2.61K	0698-0085	0	121K	0757-0467	8
61.9	0757-0276	7	2.87K	0698-3151	7	133K	0698-3451	0
68.1	0757-0397	3	3.16K	0757-0279	0	147K	0698-3452	1
75.0	0757-0398	4	3.48K	0698-3152	8	162K	0757-0470	3
82.5	0757-0399	5	3.83K	0698-3153	9	178K	0698-3243	8
90.9	0757-0400	9	4.22K	0698-3154	0	196K	0698-3453	2
100	0757-0401	0	4.64K	0698-3155	1	215K	0698-3454	3
110	0757-0402	1	5.11K	0757-0438	3	237K	0698-3266	5
121	0757-0403	2	5.62K	0757-0200	7	261K	0698-3455	4
133	0698-3437	2	6.19K	0757-0290	5	287K	0698-3456	5
147	0698-3438	3	6.81K	0757-0439	4	316K	0698-3457	6
162	0757-0405	4	7.50K	0757-0440	7	348K	0698-3458	7
178	0698-3439	4	8.25K	0757-0441	8	383K	0698-3459	8
196	0698-3440	7	9.09K	0757-0288	1	422K	0698-3460	1
215	0698-3441	8	10.0K	0757-0442	9	464K	0698-3260	9
237	0698-3442	9	11.0K	0757-0443	0			
261	0698-3132	4	12.1K	0757-0444	1			
287	0698-3443	0	13.3K	0757-0289	2			
316	0698-3444	1	14.7K	0698-3156	2			
348	0698-3445	2	16.2K	0757-0447	4			
383	0698-3446	3	17.8K	0698-3136	8			
422	0698-3447	4	19.6K	0698-3157	3			

Table 5-4. HP Part Numbers of Standard Value Replacement Components (3 of 3)

RESISTORS											
RANGE: 10 to 1.47M Ohms TYPE: Fixed-Film WATTAGE: .5 at 125°C TOLERANCE: ±1%											
Value (Ω)	HP Part Number	C D	Value (Ω)	HP Part Number	C D	Value (Ω)	HP Part Number	C D	Value (Ω)	HP Part Number	C D
10.0	0757-0984	4	215	0698-3401	0	4.64K	0698-3348	4	110K	0757-0859	2
11.0	0575-0985	5	237	0698-3102	8	5.11K	0757-0833	2	121K	0757-0860	5
12.1	0757-0986	6	261	0757-1090	5	5.62K	0757-0834	3	133K	0757-0310	0
13.3	0757-0001	6	287	0757-1092	7	6.19K	0757-0196	0	147K	0698-3175	5
14.7	0698-3388	2	316	0698-3402	1	6.81K	0757-0835	4	162K	0757-0130	2
16.2	0757-0989	9	348	0698-3403	2	7.50K	0757-0836	5	178K	0757-0129	9
17.8	0698-3389	3	383	0698-3404	3	8.25K	0757-0837	6	196K	0757-0063	0
19.6	0698-3390	6	422	0698-3405	4	9.09K	0757-0838	7	215K	0757-0127	7
21.5	0698-3391	7	464	0698-0090	7	10.0K	0757-0839	8	237K	0698-3424	7
23.7	0698-3392	8	511	0757-0814	9	12.1K	0757-0841	2	261K	0757-0064	1
26.1	0757-0003	8	562	0757-0815	0	13.3K	0698-3413	4	287K	0757-0154	0
28.7	0698-3393	9	619	0757-0158	4	14.7K	0698-3414	5	316K	0698-3425	8
31.6	0698-3394	0	681	0757-0816	1	16.2K	0757-0844	5	348K	0757-0195	9
34.8	0698-3395	1	750	0757-0817	2	17.8K	0698-0025	8	383K	0757-0133	5
38.3	0698-3396	2	825	0757-0818	3	19.6K	0698-3415	6	422K	0757-0134	6
42.2	0698-3397	3	909	0757-0819	4	21.5K	0698-3416	7	464K	0698-3426	9
46.4	0698-3398	4	1.00K	0757-0159	5	23.7K	0698-3417	8	511K	0757-0135	7
51.1	0757-1000	7	1.10K	0757-0820	7	26.1K	0698-3418	9	562K	0757-0868	3
56.2	0757-1001	8	1.21K	0757-0821	8	28.7K	0698-3103	9	619K	0757-0136	8
61.9	0757-1002	9	1.33K	0698-3406	5	31.6K	0698-3419	0	681K	0757-0869	4
68.1	0757-0794	4	1.47K	0757-1078	9	34.8K	0698-3420	3	750K	0757-0137	9
75.0	0757-0795	5	1.62K	0757-0873	0	38.3K	0698-3421	4	825K	0757-0870	7
82.5	0757-0796	6	1.78K	0698-0089	4	42.2K	0698-3422	5	909K	0757-0138	0
90.0	0757-0797	7	1.96K	0698-3407	6	46.4K	0698-3423	6	1M	0757-0059	4
100	0757-0198	2	2.15K	0698-3408	7	51.1K	0757-0853	6	1.1M	0757-0139	1
110	0757-0798	8	2.37K	0698-3409	8	56.2K	0757-0854	7	1.21M	0757-0871	8
121	0757-0799	9	2.61K	0698-0024	7	61.9K	0757-0309	7	1.33M	0757-0194	8
133	0698-3399	5	2.87K	0698-3101	7	68.1K	0757-0855	8	1.47M	0698-3464	5
147	0698-3400	9	3.16K	0698-3410	1	75.0K	0757-0856	9			
162	0757-0802	5	3.48K	0698-3411	2	82.5K	0757-0857	0			
178	0698-3334	8	3.83K	0698-3412	3	90.9K	0757-0858	1			
196	0757-1060	9	4.22K	0698-3346	2	100K	0757-0367	7			

ADJUSTMENTS

5-15. LOW VOLTAGE POWER SUPPLY ADJUSTMENTS

REFERENCE:

A1A6 $\pm 15V$ Regulator
A1A7 +100V, +5.2V Regulator
A8 Rectifier
A17 Positive Regulator
A18 Negative Regulator

DESCRIPTION:

The +15V supply is adjusted for the IF-Display Section and the +22V and +20V supplies are adjusted for the RF Section. All other low voltage supplies are measured to ensure they are within tolerance.

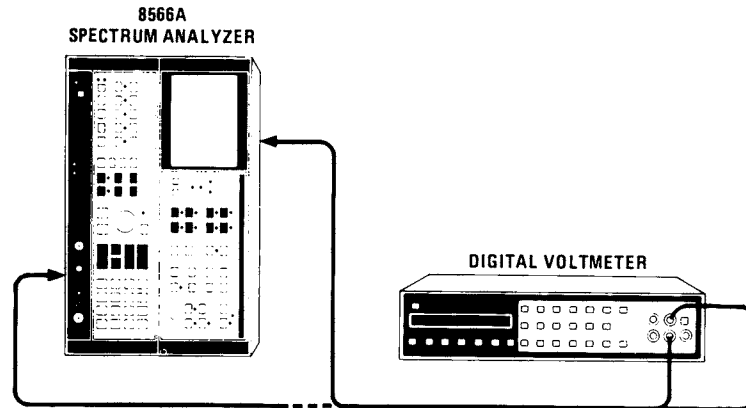



Figure 5-1. Low Voltage Power Supply Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM) HP 3455A

PROCEDURE:

IF-Display Section

1. Position instrument on right side with IF-Display Section facing right as shown in Figure 5-1.
2. Set LINE switch to ON and press  pushbutton.
3. Connect DVM to A1A6TP2. +15V indicator A1A6DS1 (yellow LED) should be lit.
4. DVM indication should be $+15.000 \pm 0.010$ Vdc. If voltage is out of tolerance, adjust A1A6R9 +15V ADJ for specified voltage. Location of adjustment is shown in Figure 5-2.

ADJUSTMENTS

5-15. LOW VOLTAGE POWER SUPPLY ADJUSTMENTS (Cont'd)

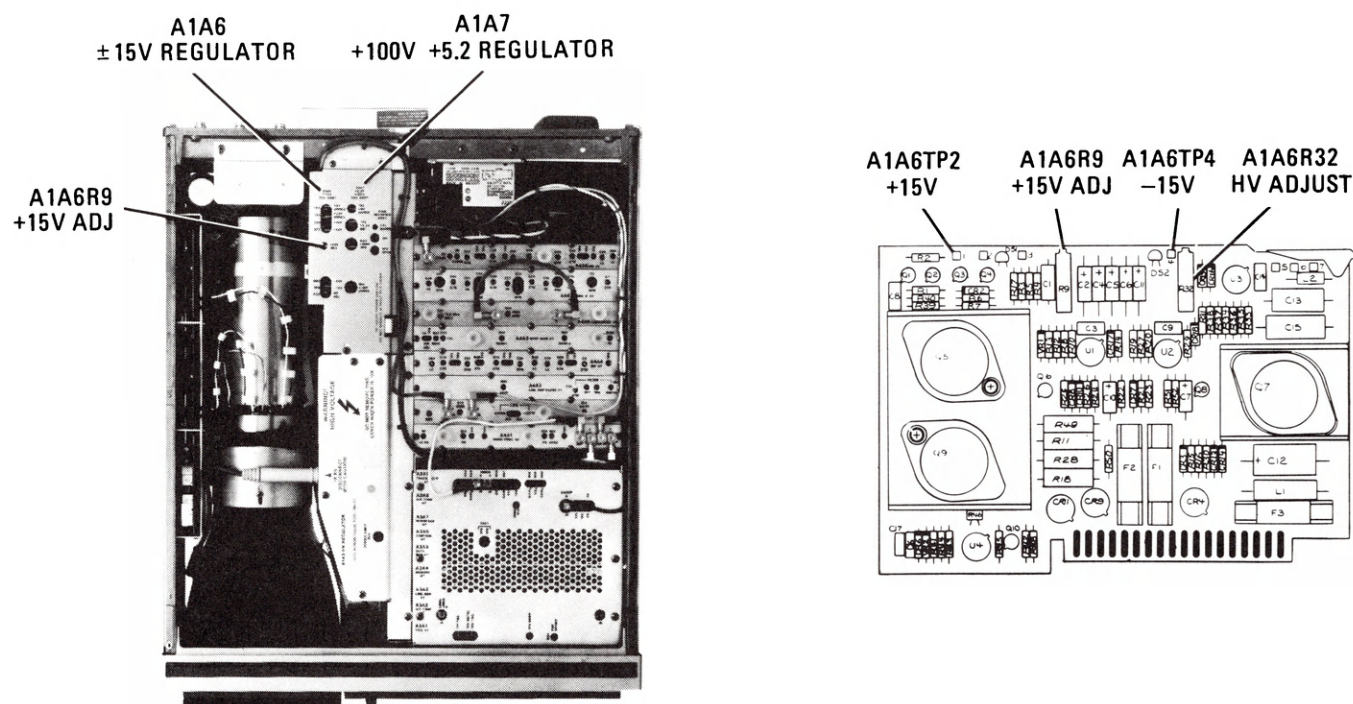


Figure 5-2. Location of IF-Display Section Low Voltage Adjustments

5. Connect DVM to A1A6TP4. -15V indicator A1A6DS2 (yellow LED) should be lit.
6. DVM indication should be -15.000 ± 0.050 Vdc. The -15V supply is referenced to the +15V supply, therefore, if -15V supply is out of tolerance, a circuit malfunction is indicated.
7. Connect DVM to A1A7TP3. +100V indicator A1A7DS2 (yellow LED) should be lit.
8. DVM indication should be $+100.0 \pm 2.0$ Vdc. The +100V supply is reference to the +15V supply, therefore, if +100V supply is out of tolerance, a circuit malfunction is indicated.
9. Connect DVM to A1A7TP2. +5.2V indicator A1A7DS1 (yellow LED) should be lit.
10. DVM indication should be $+5.200 \pm 0.050$ Vdc. The +5.2V supply is referenced to the +15V supply, therefore, if +5.2 supply is out of tolerance, a circuit malfunction is indicated.

RF Section

11. Connect DVM to A8TP1; ground lead to ground. +22V indicator A8DS1 (yellow LED) should be lit.
12. Adjust A8R2 +22V ADJ for DVM indication of $+22.000 \pm 0.020$ Vdc. Location of adjustment is shown in Figure 5-3.

ADJUSTMENTS

5-15. LOW VOLTAGE POWER SUPPLY ADJUSTMENTS (Cont'd)

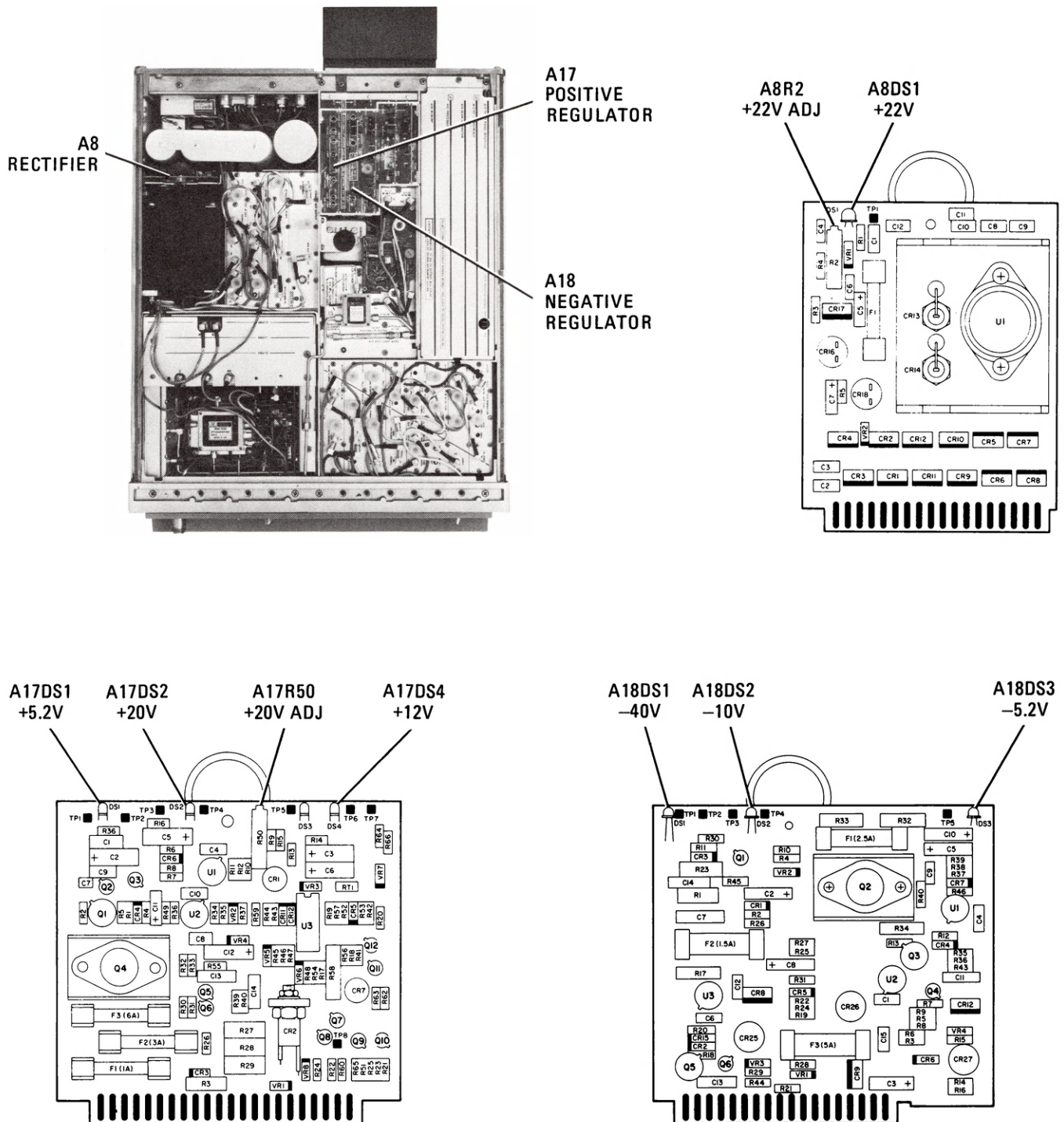


Figure 5-3. Location of RF Section Low Voltage Adjustments

ADJUSTMENTS

5-15. LOW VOLTAGE POWER SUPPLY ADJUSTMENTS (Cont'd)

13. Connect DVM to A17TP4. +20V indicator A17DS2 (yellow LED) should be lit.
14. Adjust A17R50 +20V ADJ for DVM indication of $+20.000 \pm 0.001$ Vdc.
15. Connect DVM to A17TP6. +12V indicator A17DS4 (yellow LED) should be lit.
16. DVM indication should be $+12.25 \pm 0.30$ Vdc. The +12V supply voltage is set by a precision voltage regulator, therefore, if the +12V supply is out of tolerance, a circuit malfunction is indicated.
17. Connect DVM to A17TP2. +5.2V indicator A17DS1 (yellow LED) should be lit.
18. DVM indication should be $+5.20 \pm 0.05$ Vdc. The +5.2V supply is referenced to the +20V supply, therefore, if the +5.2V supply is out of tolerance, a circuit malfunction is indicated.
19. Connect DVM to A18TP5. -5.2V indicator A18DS3 (yellow LED) should be lit.
20. DVM indication should be -5.20 ± 0.05 Vdc. The -5.2V supply is referenced to the +20V supply, therefore, if the -5.2V supply is out of tolerance, a circuit malfunction is indicated.
21. Connect DVM to A18TP1. -40V indicator A18DS1 (yellow LED) should be lit.
22. DVM indication should be 39.8 ± 0.4 Vdc. The -40V supply is referenced to the +20V supply, therefore, if the -40V supply is out of tolerance, a circuit malfunction is indicated.
23. Connect DVM to A18TP4. -10V indicator A18DS2 (yellow LED) should be lit.
24. DVM indication should be -10.0 ± 0.1 Vdc. The -10V supply is referenced to the +20V supply, therefore, if the -10V supply is out of tolerance, a circuit malfunction is indicated.

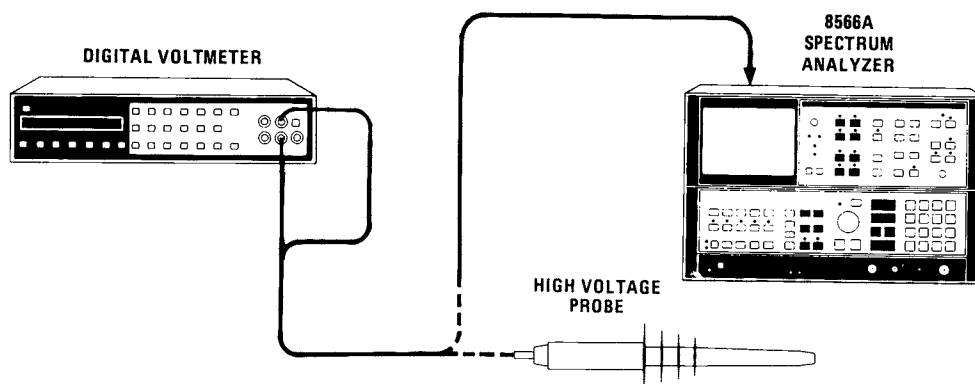
5-16. HIGH VOLTAGE ADJUSTMENT

REFERENCE:

A1A3 High Voltage Regulator
A1A6 ± 15 V Regulator
A1A7 +100V, +5.2V Regulator

DESCRIPTION:

A 1000:1 divider probe is used to measure the CRT cathode voltage. First, the accuracy of this high-voltage probe is checked by comparing measurements of the +100 Vdc supply voltage with and without the probe. Any measurement error due to use of the high-voltage probe is calculated into the adjustment specification of the CRT cathode voltage, which is adjusted with the A1A6 HV ADJUST control.

5-16. HIGH VOLTAGE ADJUSTMENT (Cont'd)*Figure 5-4. High Voltage Adjustment Setup***EQUIPMENT:**

Digital Voltmeter (DVM) HP 3455A
DC High-Voltage Probe (1000:1 divider) HP 34111A

PROCEDURE:

1. Position instrument upright as shown in Figure 5-4 with top cover removed.
2. Connect DVM to A1A7TP3 (+100V) without the high-voltage probe. (Refer to Figure 5-4.) Place the DVM on the 100V range. The accuracy of the high-voltage probe is specified connected to a DC Voltmeter with 10M Ω input resistance. The recommended DVM has a 10M Ω input resistance on the 100V range. All measurements in this procedure should be performed with the DVM on the 100V range to ensure greatest accuracy.
3. Set LINE switch to ON and press 2-22
GHz pushbutton.
4. Note DVM indication at A1A7TP3.
5. Connect high-voltage probe to the DVM and connect to A1A7TP3.
6. Note DVM indication.
7. Divide the DVM indication in Step 6 by the DVM indication in Step 4. This gives the calibration factor needed to compensate for high-voltage probe error.
8. Disconnect high-voltage probe from A1A7TP3. Set LINE switch to STANDBY. Remove ac line cord from both instrument sections.

ADJUSTMENTS

5-16. HIGH VOLTAGE ADJUSTMENT (Cont'd)

9. The main power ON indicator (red LED) on the A1A8 Rectifier should be completely OFF before proceeding with this procedure. The indicator will remain lit for several seconds after ac line cord has been removed and will go out slowly (light becomes dimmer until completely out).

WARNING

In the following steps, it is necessary to probe voltages which, if contacted, could cause serious personal injury. Be extremely careful.

10. Remove protective cover from the A1A3 High Voltage Regulator. Refer to Figure 5-5 for location of A1A3.
11. Connect high-voltage probe to A1A3TP3. With power supplied to the instrument, A1A3TP3 is at a voltage level of approximately 4000 Vdc. Be careful. Refer to Figure 5-5 for location of test point.
12. Reconnect ac line cords to the rear of each instrument section. Set LINE switch to ON.
13. Wait approximately 30 seconds for dc regulator circuits to stabilize.
14. Adjust A1A6R32 HV ADJUST for a DVM indication equal to the calibration factor calculated in Step 7 times 4000 ± 150 Vdc. Refer to Figure 5-2 for location of adjustment.

EXAMPLE:

If the calibration factor calculated in Step 7 was 0.00099, the lower adjustment limit would be 0.00099×3850 Vdc or 3.3715 Vdc indication on DVM. The upper adjustment limit would be 0.00099×4150 Vdc or 4.1085 Vdc indication on DVM.

15. Set LINE switch to STANDBY. Remove ac line cord from the rear of each instrument section.
16. Wait for the main power ON indicator (red LED) on the A1A8 Rectifier to go completely out before proceeding.
17. Disconnect high-voltage probe from A1A3TP3. Replace protective cover over the A1A3 High Voltage Regulator.
18. Reconnect ac line cords to the rear of each instrument section.

ADJUSTMENTS

5-16. HIGH VOLTAGE ADJUSTMENT (Cont'd)

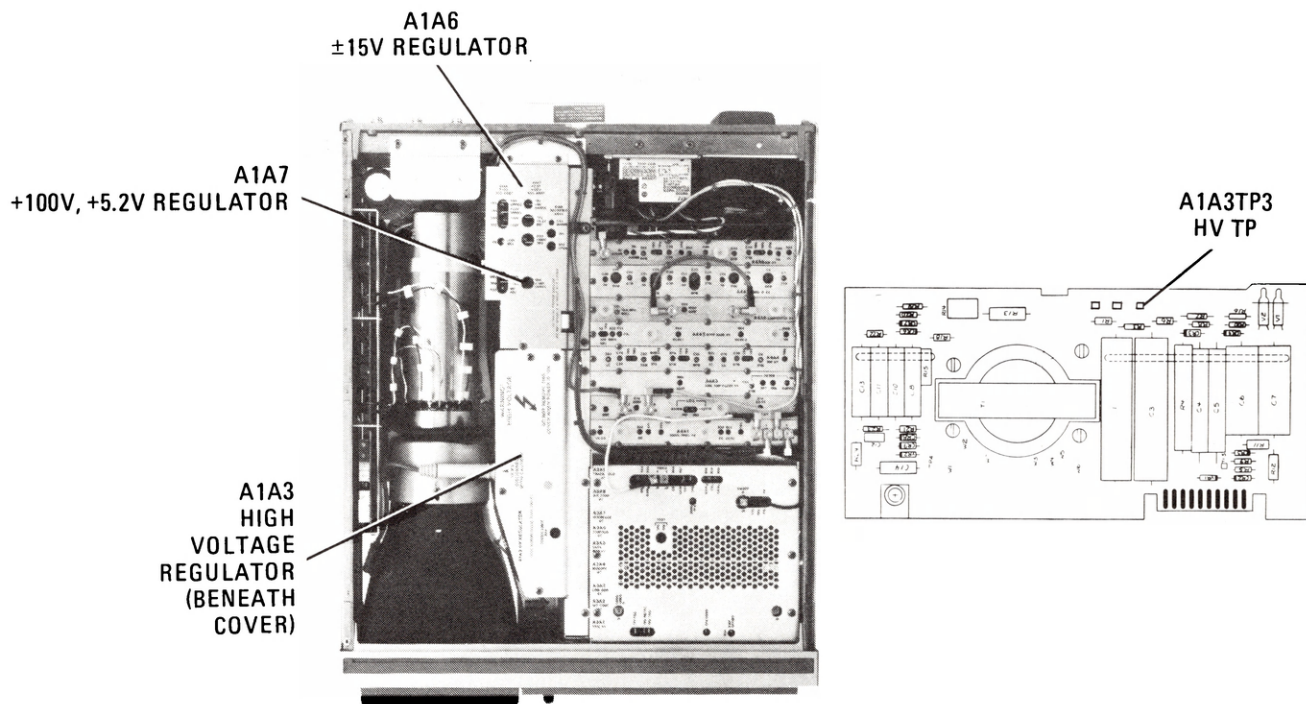


Figure 5-5. Location of High and Low Voltage Regulator Assemblies

5-17. PRELIMINARY DISPLAY ADJUSTMENTS

REFERENCE:

A1A1 Keyboard, A1A2 Z Axis Amplifier
A1A4 X Deflection Amplifier, A1A5 Y Deflection Amplifier

DESCRIPTION:

All adjustments of the display section are performed to adjust the CRT display for proper horizontal, vertical, and intensity characteristics. The preliminary adjustments are included for adjustment of display when major repair has been performed in the display section. For example, replacement or repair of the A1A2 Z Axis Amplifier. If adjustment is being performed as a result of minor repair (replacement of a transistor, for example), or as a routine maintenance procedure, only the final adjustments in paragraph 5-18 need be performed.

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

CAUTION

Be sure not to allow a fixed spot of high intensity to remain on the 8566A Spectrum Analyzer CRT. A fixed spot of high intensity may permanently damage the phosphor coating of the CRT. Monitor the CRT closely during the following adjustment procedures and if a spot occurs, move spot off screen by adjusting either intensity or horizontal or vertical deflection position controls.

A. Calibration of Pulse Generator, Oscilloscopes, and Probes

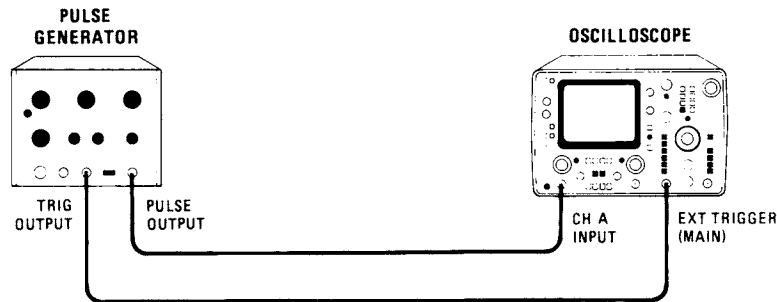


Figure 5-6. Equipment Calibration Setup

EQUIPMENT:

Oscilloscope	HP1741A
Pulse Generator	HP 8002A
10:1 Divider Probe (2 Required).	HP 10004D
Display Adjustment PC Board (Part of Service Accessories)	HP 85662-60088

PROCEDURE:

1. Connect one 10:1 divider probe to the oscilloscope Channel A input and one to the Channel B input.
2. Set oscilloscope controls as follows:

MAIN pushbutton	IN
DLY'D pushbutton	OUT
MIXED pushbutton	OUT
MAIN INT/EXT.	INT
MAIN TIME/DIV . . . . .	.2 msec

ADJUSTMENTS

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

VOLTS/DIV

Channel A .....	.2
CAL	Fully clockwise
Channel B .....	.2
CAL	Fully Clockwise

3. Connect Channel A probe to oscilloscope 10V calibrator. Select Channel A display. Adjust probe for optimum square wave display on oscilloscope CRT. Adjust vertical amplifier CAL for a 5 division peak-to-peak display. Disconnect probe from calibrator.
4. Connect Channel B probe to oscilloscope 10V calibrator. Select Channel B display. Adjust probe for optimum square wave display on oscilloscope CRT. Adjust vertical amplifier CAL for a 5 division peak-to-peak display. Disconnect probe from calibrator.

NOTE

Each probe is now compensated for the oscilloscope input to which it is connected; do not interchange probes without recalibrating.

5. Mark probe connected to Channel A input and disconnect both 10:1 probes from oscilloscope. Using two BNC cables, connect equipment as shown in Figure 5-6.
5. Set instrument controls as follows:

Pulse Generator:

Repetition Rate .....	.3 MHz
Pulse Width	30 nsec
Vernier	Midrange
Rise and Fall Time	10 nsec
Vernier	fully CCW
Amplitude	2.5V
Pulse Polarity	+

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

Oscilloscope:

Main pushbutton	IN
DLY'D pushbutton	OUT
MIXED pushbutton	OUT
Delayed Trigger Level	Fully CCW
Main TIME/DIV	1 μ sec
Vernier	CAL
Trigger Holdoff	Fully CCW
Main INT/EXT	EXT
Main AC/DC	DC
Delay .....	.05 μ sec
VOLTS/DIV	
Channel A .....	.5
Trigger	A
All other pushbuttons	OUT

7. Adjust Main Trigger Level for a stable display. Adjust Repetition Rate Vernier so that pulses are approximately 5 divisions (5 μ sec) apart.
8. Adjust Amplitude Vernier on pulse generator for a 2V peak-to-peak signal.
9. Adjust Delay dial for an intensified area over the center pulse as shown in Figure 5-7. If intensified area is not visible, decrease intensity of display.

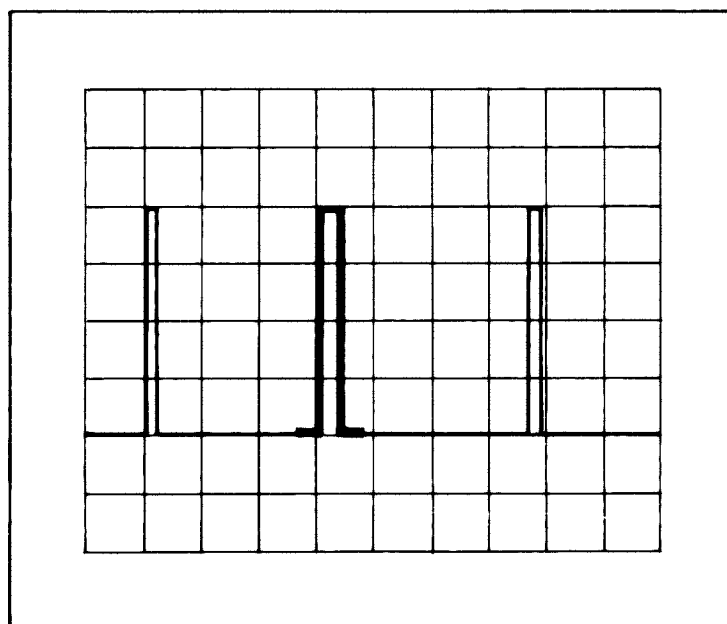


Figure 5-7. Equipment Calibration Waveform

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

10. Push DLY'D pushbutton IN and MAIN pushbutton OUT.
11. Adjust Delay dial and Horizontal position to set rising edge of pulse on first vertical graticule.
12. Adjust pulse generator Pulse Width Vernier for a pulse width of 5 division (250 nsec). Remove BNC cables and reconnect 10:1 divider probes to oscilloscope Channel A and Channel B inputs.

B. X and Y Deflection Amplifier Pulse Response Adjustments

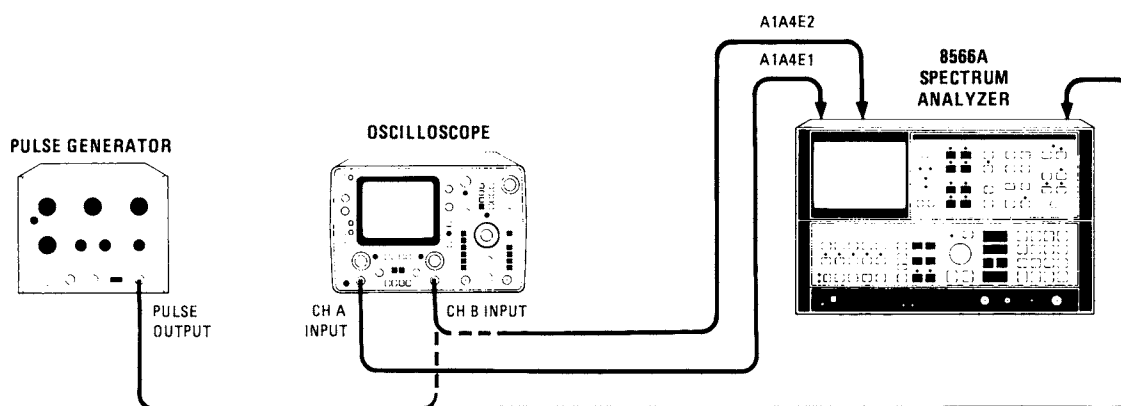


Figure 5-8. Preliminary Display Adjustments Setup

1. Connect Channel A calibrated 10:1 divider probe to A1A4E1 and Channel B probe to A1A4E2 as shown in Figure 5-8.
2. Set oscilloscope controls as follows:

Display	A + B
VOLTS/DIV	
Channel A.....	1
Channel B.....	1

3. Remove cover over A3 Digital Storage area and remove A3A2 Intensity Control. Insert Display Adjustment PC Board HP Part Number 85662-60088 in place of A3A2. Install A1A2 Z Axis Amplifier on extender board. Refer to Figure 5-9 for location of A3A2 assembly.
4. Connect output of pulse generator to J1 (X input) on test board.
5. Push Channel B INVERT pushbutton IN. Set all other control settings as listed in step A-6. Set pulse generator controls as listed in step A-6.

ADJUSTMENTS

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

6. Set 8566A Line switch ON and press 2-22
GHz pushbutton. Set INTENSITY control fully counterclockwise.
7. Adjust A1A4R7 X POSN and A1A4R27 X GAIN for a full eight division display on oscilloscope as shown in Figure 5-10. Refer to Figure 5-9 for location of adjustments.

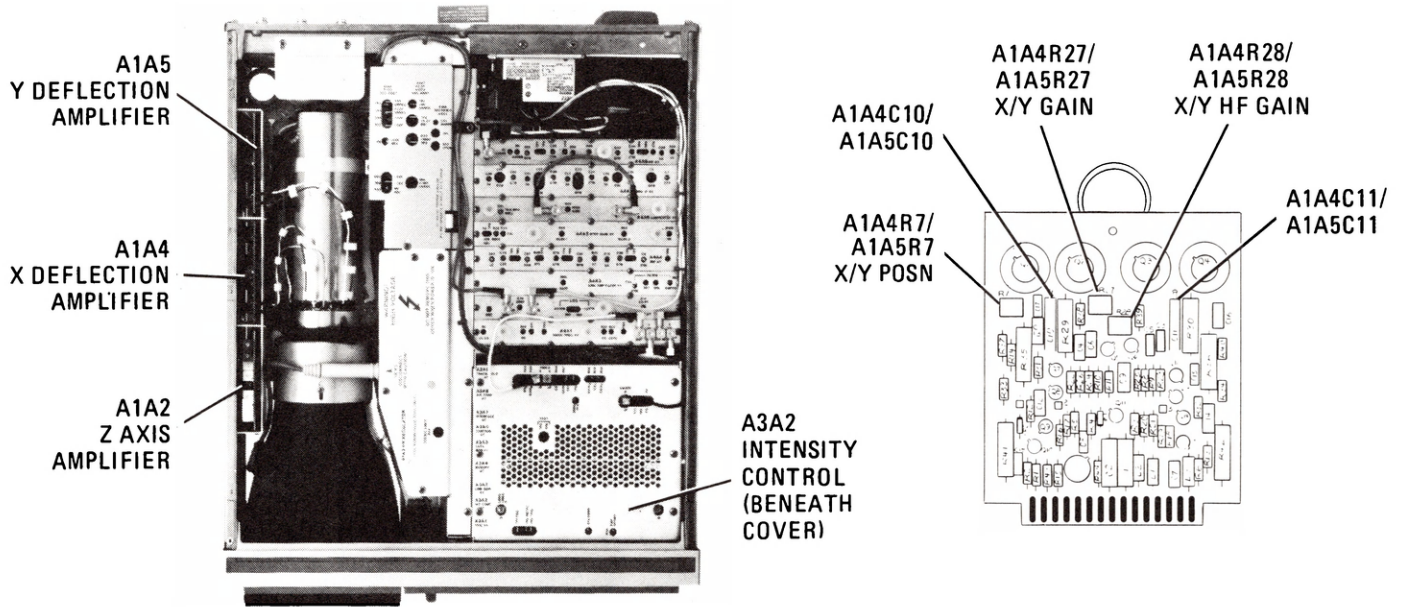


Figure 5-9. Location of X and Y Adjustments

8. Measure the rise and fall times between the 10% and 90% points on the display by noting where the trace crosses the first and seventh horizontal graticule lines. Refer to Figure 5-10.
9. Adjust A1A4R28 HF GAIN, A1A4C10, and A1A4C11 for minimum overshoot and rise and fall times.
10. Rise and fall times should both be less than 65 nsec between 10% and 90%. Overshoot should be less than 3% (approximately 0.25 divisions).

NOTE

Always adjust A1A4C10 and A1A4C11 approximately equal amounts. Do not adjust one to its minimum value and the other to its maximum value.

ADJUSTMENTS

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

11. Connect Channel A probe to A1A5E1 and Channel B probe to A1A5E2. Connect output of pulse generator to J2 (Y input) on Display Adjustment PC Board.
12. The A1A5 Y Deflection Amplifier is identical to the A1A4 X Deflection Amplifier. Repeat steps 7 through 10 for the A1A5.

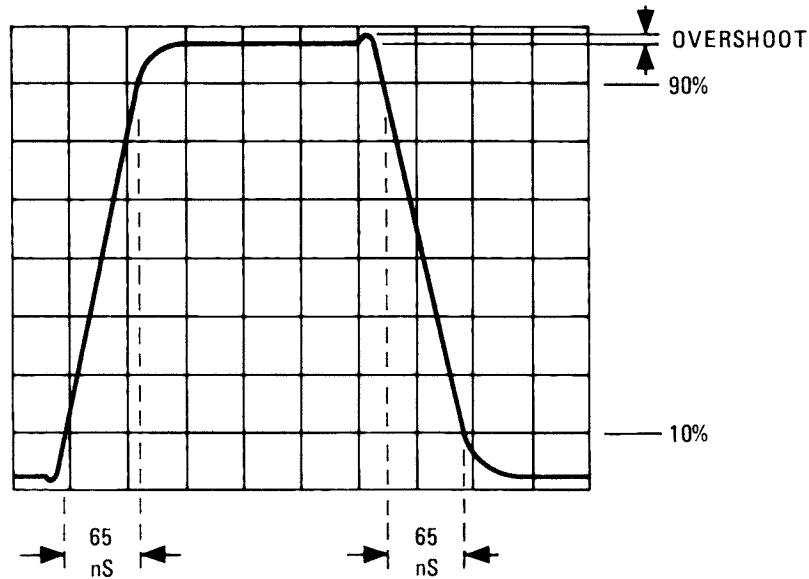


Figure 5-10. Rise and Fall Times and Overshoot Adjustment Waveform

C. Z Axis Amplifier Pulse Response Adjustments

Pulse Response of Control Gate Amplifier to $\overline{\text{BLANK}}$ Input

1. Connect Channel A probe to A1A2TP2. Connect Channel B probe to the output of the pulse generator. Connect output of pulse generator to J3 (Z input) on Display Adjustment PC Board and push switch DOWN.
2. Set oscilloscope controls as follows:

VOLTS/DIV	
Channel A.....	1
Channel B.....	1
All other pushbuttons.....	Same as in Step A-6.
3. Set all pulse generator controls the same as in Step A-6.

ADJUSTMENTS

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

4. Select Channel B display on oscilloscope. Adjust pulse generator Amplitude Vernier for a 4V peak-to-peak output pulse as indicated on oscilloscope display.
5. Adjust A1A4R7 X POSN and A1A5R7 Y POSN to place CRT beam off the CRT.
6. Set 8566A INTENSITY control fully clockwise. Select Channel A display on oscilloscope.
7. Note display on oscilloscope CRT. Pulse should be at least 55V peak-to-peak.
8. Adjust oscilloscope VOLTS/DIV Vernier for a full eight division display. Refer to Figure 5-10.
9. Measure the rise and fall times of the pulse between the 10% and 90% points by noting where the trace crosses the first and seventh horizontal graticule lines. Refer to Figure 5-10.
10. Adjust A1A2R22 HF GAIN and A1A2C10 for minimum overshoot and minimum rise and fall times. Refer to Figure 5-10. Refer to Figure 5-11 for location of adjustments.
11. Rise and fall times should be less than 30 nsec. Overshoot should be less than 5%.
12. Select Channel B display on oscilloscope. Adjust pulse generator Amplitude Vernier for a pulse of 2.5V peak-to-peak.
13. Select Channel A on oscilloscope. Note pulse display. Pulse should be greater than 55V peak-to-peak.

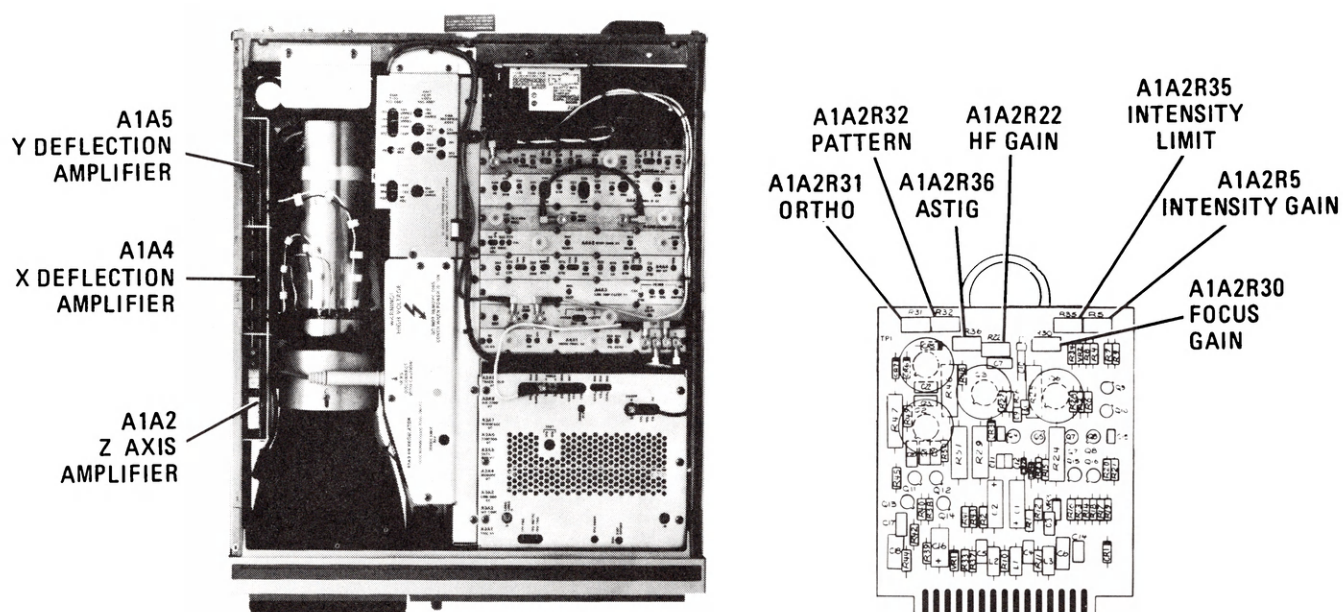


Figure 5-11. Location of Z Adjustments

ADJUSTMENTS

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

Pulse Response of Z Amplifier to Z Axis Input

14. Set switch on Display Adjustment PC Board UP.
15. Select Channel B display on oscilloscope. Adjust pulse generator Amplitude Vernier for a 2V peak-to-peak pulse output.
16. Select Channel A display on oscilloscope. Note oscilloscope display. The top of the pulse should be at approximately 82V and the peak-to-peak amplitude should be greater than 55V.
17. Adjust VOLTS/DIV Vernier for a full eight divisions display. Refer to Figure 5-10.
18. Measure the rise and fall times of the pulse between 10% and 90% by noting where the trace crosses the first and seventh horizontal graticule lines.
19. Rise and fall times should be less than 100 nsec.
20. Set Channel A VOLTS/DIV to 1 and Vernier to CAL.
21. Set 8566A INTENSITY control fully counterclockwise. Note oscilloscope display.
22. Pulse amplitude should be less than 1V peak-to-peak. DC level of signal should be less than 25V.

Focus Coarse Adjustment

23. Disconnect Channel A probe from A1A2TP2 and connect to A1A2TP1.
24. Adjust 8566A front-panel FOCUS control through its full range while monitoring oscilloscope display. Pulse display should vary from greater than +80V to less than +10V. Reset front-panel FOCUS control to mid-range.
25. Connect Channel A probe to the base of A1A2Q14. Set 8566A front-panel INTENSITY control fully clockwise. Set oscilloscope VOLTS/DIV to .05.
26. Adjust A1A2R20 FOCUS GAIN for a 1V peak-to-peak pulse display on oscilloscope. Refer to Figure 5-11 for location of A1A2R30.
27. Connect Channel A probe to A1A2TP2. Oscilloscope display should be an inverted pulse approximately 30V peak-to-peak.
28. Set 8566A front-panel INTENSITY control fully counterclockwise. Connect Channel A probe to A1A2TP1.
29. Adjust front-panel FOCUS control for a dc level of +50 Vdc on oscilloscope.

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

D. CRT Adjustments

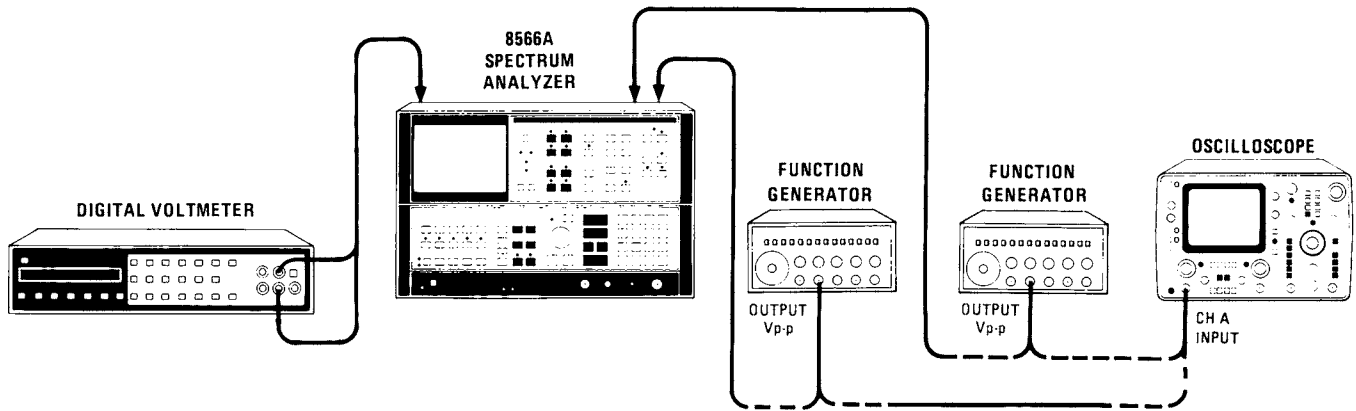


Figure 5-12. CRT Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM)	HP 3455A
Oscilloscope	HP 1741A
Function Generator (2 required).	HP 3312A
Display Adjustments PC Board (Part of Service Accessories)	HP 85662-60088

Focus Adjustments

1. Set 8566A front-panel INTENSITY control fully counterclockwise.
2. Adjust A1A2R35 INTENSITY LIMIT clockwise until CRT spot is just visible. If adjustment has insufficient range to produce a CRT spot, increase the value of A1A2R9. Refer to Table 5-3 for range of values. Refer to Figure 5-11 for location of adjustment.
3. Center 8566A front-panel INTENSITY control.

WARNING

The connections to A1A3 FOCUS LIMIT adjustment A1A3R14 are at a potential of approximately – 2500 Vdc. Be very careful and use a non-metallic adjusting tool.

4. Adjust A1A2R36 ASTIG and A1A3R14 FOCUS LIMIT for a sharp, focused CRT spot. Refer to Figure 5-11 for location of adjustments.

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

Intensity Adjustment

5. Set switch on Display Adjustment PC Board DOWN. Disconnect Pulse Generator from J3.
6. Adjust A1A4R7 X POSN to position CRT spot off screen.
7. Set front-panel INTENSITY control fully clockwise.
8. Connect DVM to A1A2P1 Pin 18; note DVM indication.
9. Connect DVM to A1A2P1 Pin 17.
10. Adjust A1A2R5 INTENSITY GAIN for DVM indication equal to that noted in Step 7. If same value cannot be achieved, set as close as possible. Refer to Figure 5-11 for location of adjustment.
11. Set switch on Display Adjustment PC Board UP.

HORIZONTAL Adjustments

12. Connect function generator output to oscilloscope input. Adjust function generator output for a 500 kHz, 2V peak-to-peak sine wave signal.
13. Disconnect function generator from oscilloscope and connect to J1 (X input) on Display Adjustment PC Board.
14. Adjust front-panel INTENSITY control for a convenient level.
15. Adjust front-panel ALIGN for a horizontal trace.
16. Adjust A1A4R27 X GAIN and A1A4R7 X POSN to set the horizontal trace to the approximate position shown in Figure 5-13. Refer to Figure 5-9 for location of adjustments.

Vertical Adjustments

17. Remove function generator from J1 on Display Adjustment PC Board and connect to J2 (Y input).
18. Adjust A1A2R31 ORTHO for a vertical trace. Refer to Figure 5-11 for location of adjustment.
19. Adjust A1A5R27 Y GAIN and A1A5R7 Y POSN to set the vertical trace to the approximate position shown in Figure 5-13. Refer to Figure 5-9 for location of adjustments.

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

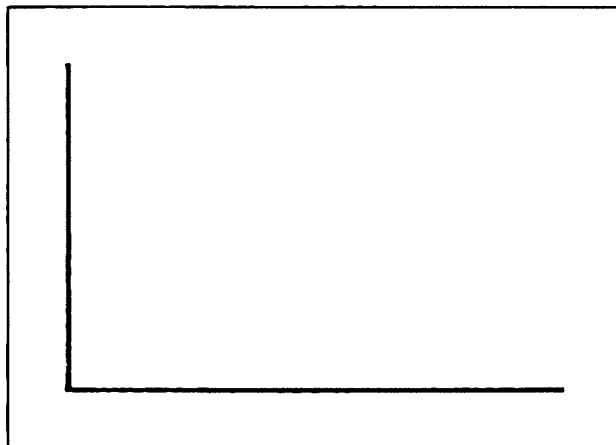


Figure 5-13. X and Y Deflection Adjustment Waveform

Pattern Adjustments

20. Disconnect Function generator from Display Adjustment PC Board J2 and reconnect to J1.
21. Connect another function generator output to oscilloscope input and adjust output for a 1 kHz, 2V peak-to-peak sine wave signal. Disconnect function generator from oscilloscope and connect to Display Adjustment PC Board J2. Set switch DOWN.
22. Adjust A1A2R32 PATTERN for best rectangular display. Display should not exhibit pin cushioning or barreling. Refer to Figure 5-14. It may be necessary to readjust A1A2R31 ORTHO and front-panel ALIGN to achieve optimum rectangular display. Refer to Figure 5-11 for location of adjustments.
23. Set LINE switch to STANDBY. Remove ac line cord from rear of each instrument section.
24. Replace A1A2 Z Axis Amplifier in instrument without extender board.
25. Disconnect function generators from Display Adjustment PC Board. Remove PC Board and replace A3A2 Intensity Control in instrument.
26. Connect ac line cord to rear of each instrument section. Set LINE switch to ON.
27. It may be necessary at this time to readjust horizontal and vertical gain and position adjustments to optimize the CRT display. When complete, display (graticule and annotation) should fill entire screen.

5-17. PRELIMINARY DISPLAY ADJUSTMENTS (Cont'd)

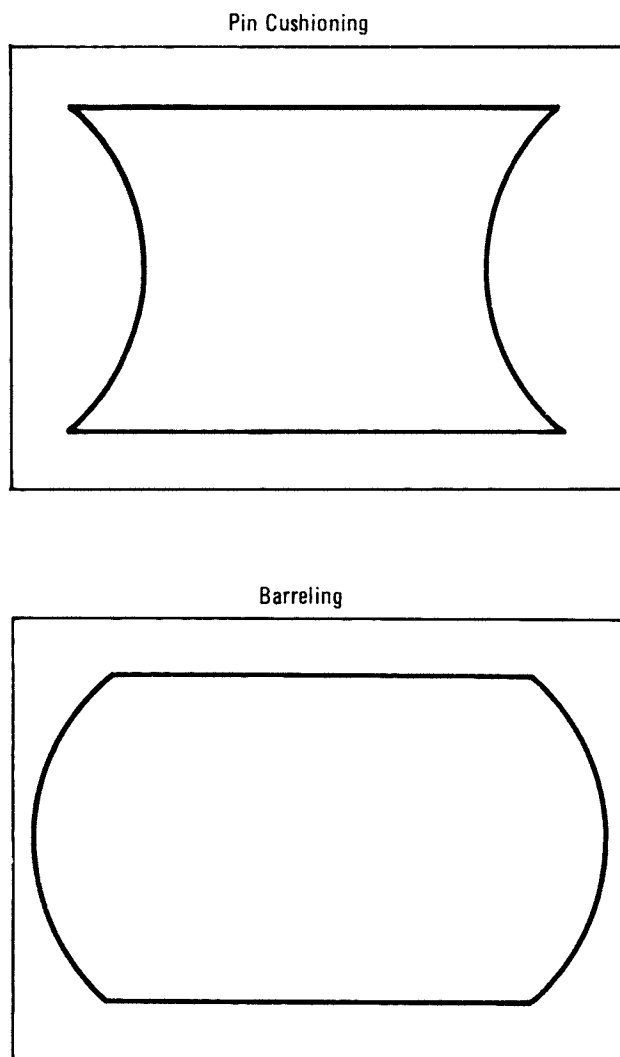


Figure 5-14. Examples of Pin Cushioning and Barreling

5-18. FINAL DISPLAY ADJUSTMENTS

REFERENCE:

A1A1 Keyboard, A1A2 Z Axis Amplifier
A1A4 X Deflection Amplifier, A1A5 Y Deflection Amplifier

DESCRIPTION:

This procedure is used to perform fine adjustment of the CRT display. First, the display is adjusted for best focus over the full CRT then the graticule is adjusted for optimum rectangular display.

ADJUSTMENTS

5-18. FINAL DISPLAY ADJUSTMENTS (Cont'd)

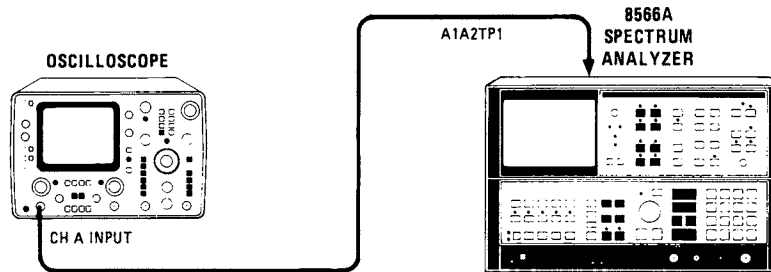


Figure 5-15. Final Display Adjustments Setup

EQUIPMENT:

Oscilloscope HP 1741A

PROCEDURE:

1. Remove top cover from instrument. Set LINE switch to ON and press **2-22 GHz** pushbutton.
2. Key in **FREQUENCY SPAN** 100 Hz, **CENTER FREQUENCY** 1 GHz, TRACE A **BLANK**. Trace should be blanked and CRT annotation in the active function region should appear similar to Figure 5-16.
3. Adjust front-panel FOCUS for clear, sharp characters in the active function region.
4. Note graticule lines. If graticule lines appear to be out of focus, connect oscilloscope to A1A2TP1 as shown in Figure 5-15.

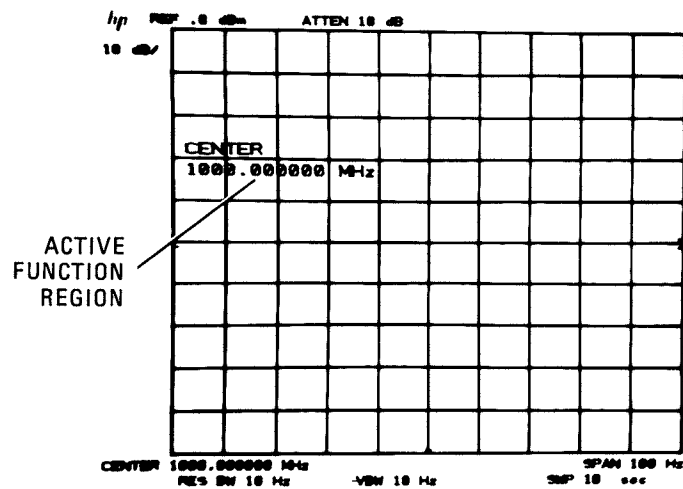


Figure 5-16. 8566A CRT Display for Final Display Adjustments

ADJUSTMENTS

5-18. FINAL DISPLAY ADJUSTMENTS (Cont'd)

5. Oscilloscope display should be similar to that shown in Figure 5-17.
6. Note dc level and peak-to-peak offset of waveform.
7. Adjust A1A2R30 FOCUS GAIN for a larger peak-to-peak deviation in pulse on oscilloscope display. Refer to Figure 5-18 for location of adjustment.
8. Adjust front-panel FOCUS control to reset dc level of oscilloscope display to the value noted in Step 6.
9. CRT annotation in active function region should be focused. If not, adjust front-panel FOCUS control to focus characters.

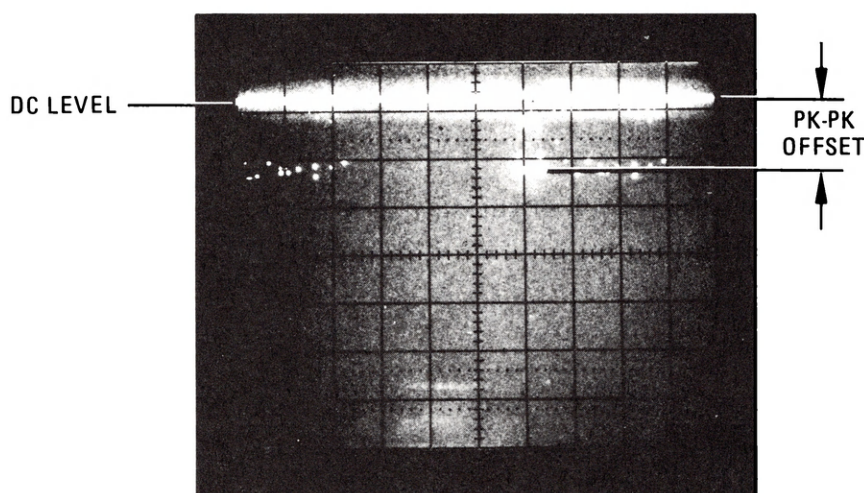


Figure 5-17. FOCUS GAIN Adjustment Waveform

10. Note focus of graticule lines. If graticule lines appear to be more in focus than before (Step 4), adjustment of A1A2 FOCUS GAIN in Step 7 was in the proper direction. If so, repeat Steps 6 through 9 until CRT annotation in active function region and graticule lines are in focus.
11. If graticule lines appear to be less in focus than before, adjustment of A1A2 FOCUS GAIN was in the wrong direction. Repeat Steps 6 through 9, adjusting A1A2 FOCUS GAIN A1A2R30 for a smaller peak-to-peak deviation of pulse on oscilloscope display, until CRT annotation in active function region and graticule lines are both in focus.
12. Adjust A1A4R27 X GAIN, A1A4R7 X POSN, A1A5R27 Y GAIN, and A1A5R7 Y POSN for optimum rectangular display of graticule on CRT. Refer to Figure 5-18 for location of adjustments.

ADJUSTMENTS

5-18. FINAL DISPLAY ADJUSTMENTS (Cont'd)

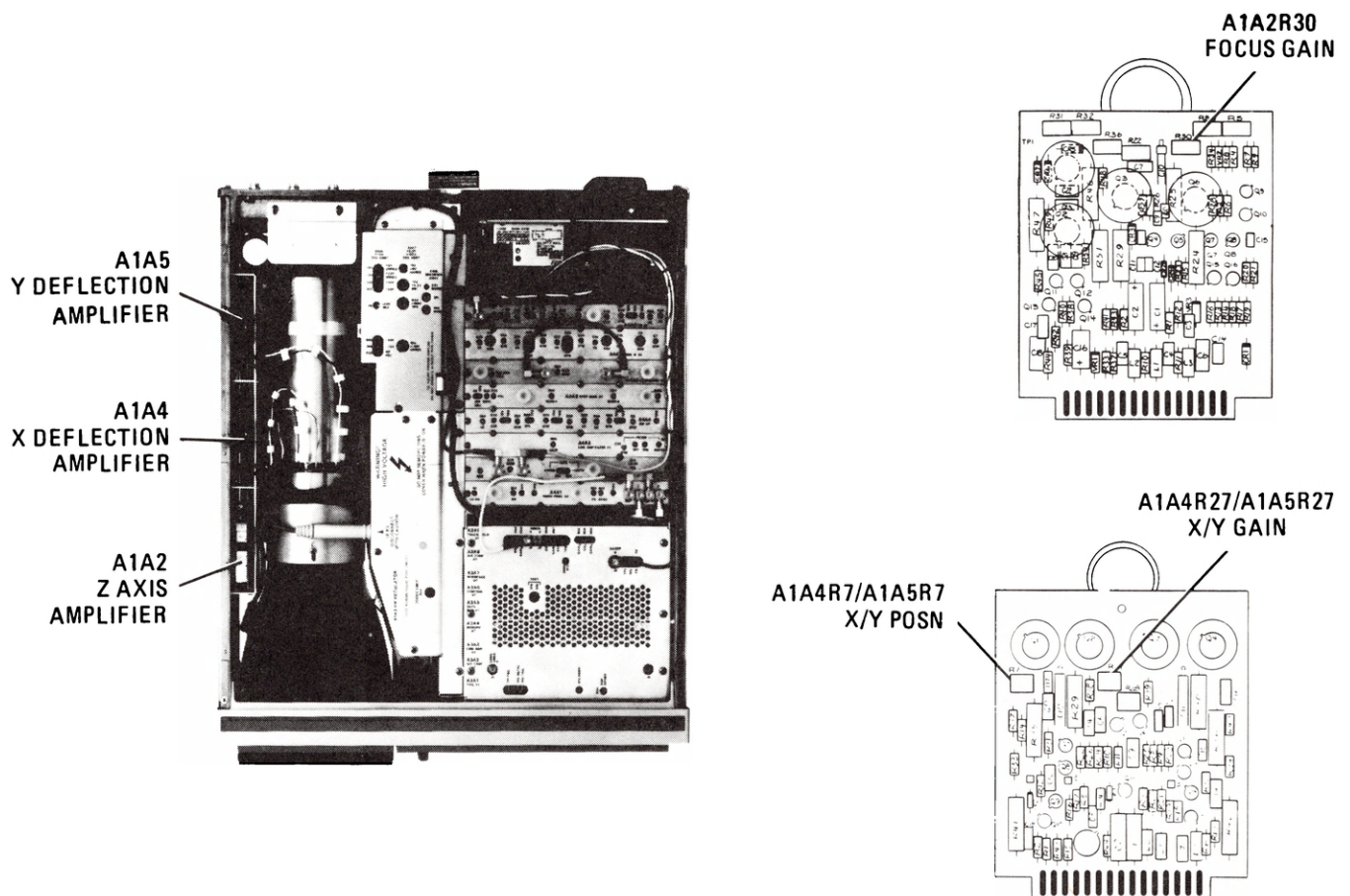


Figure 5-18. Location of Final Display Adjustments

5-19. LOG AMPLIFIER ADJUSTMENTS

REFERENCE:

A4A3 Log Amplifier—Filter

A4A2 Log Amplifier—Detector

RELATED PERFORMANCE TESTS:

Amplitude Fidelity Test

5-19. LOG AMPLIFIER ADJUSTMENTS (Cont'd)

DESCRIPTION:

First, the A4A2 Log Amplifier–Detector ZERO adjustment is adjusted for zero volts DVM indication then the A4A3 Log Amplifier–Filter is set for center frequency by injecting a signal and adjusting the Bandpass Filter center adjustment for maximum DVM indication. The Bandpass Filter amplitude is adjusted by monitoring the output of the filter with a DVM and adjusting the amplitude for the same DVM indication with the log amplifier filter control line shorted to the +15V supply and not shorted. Next, log fidelity (gain and offset of the log curve) is adjusted by adjusting the –12 VTV and the PIN diode attenuator. Last, the linear gain step adjustments are performed to set the proper amount of step gain in the linear mode of operation.

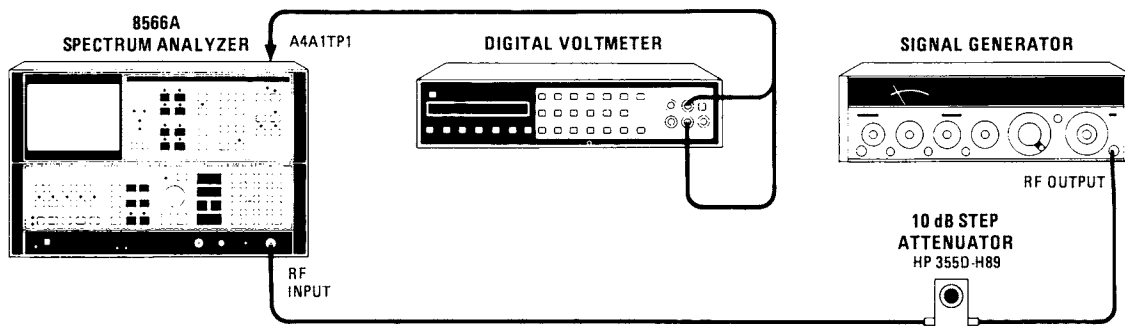


Figure 5-19. Log Amplifier Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM)	HP 3455A
10-dB Step Attenuator	HP 355D, Option H89
Signal Generator	HP 8640B

PROCEDURE:

1. Position instrument upright as shown in Figure 5-19 with top cover removed.
2. Set LINE switch to ON and press 2-22 GHz pushbutton.
3. Key in CENTER FREQUENCY 7.6 MHz REFERENCE LEVEL +10 dBm, FREQUENCY SPAN 0 Hz, RES BW 3 kHz, and press LIN pushbutton.

5-19. LOG AMPLIFIER ADJUSTMENTS (Cont'd)

4. Connect DVM to A4A1TP1. Do not connect signal to SIGNAL INPUT.

Offset Adjustment

5. Adjust A4A2R79 ZERO for 0.0000 ± 0.0005 Vdc. Refer to Figure 5-20 for location of adjustment.

Bandpass Filter Center Adjustment

6. Press LOG pushbutton.
7. Set Signal Generator for 7.6000 ± 0.0001 MHz at $+5.0$ dBm ± 0.5 dB output and connect to 8566A SIGNAL INPUT.
8. Adjust A4A3C55 CTR for maximum DVM indication. Refer to Figure 5-20 for location of adjustment. If unable to achieve a "peak" indication, increase or decrease value of A4A3C52 and A4A3C53. Refer to Table 5-3 for range of values.

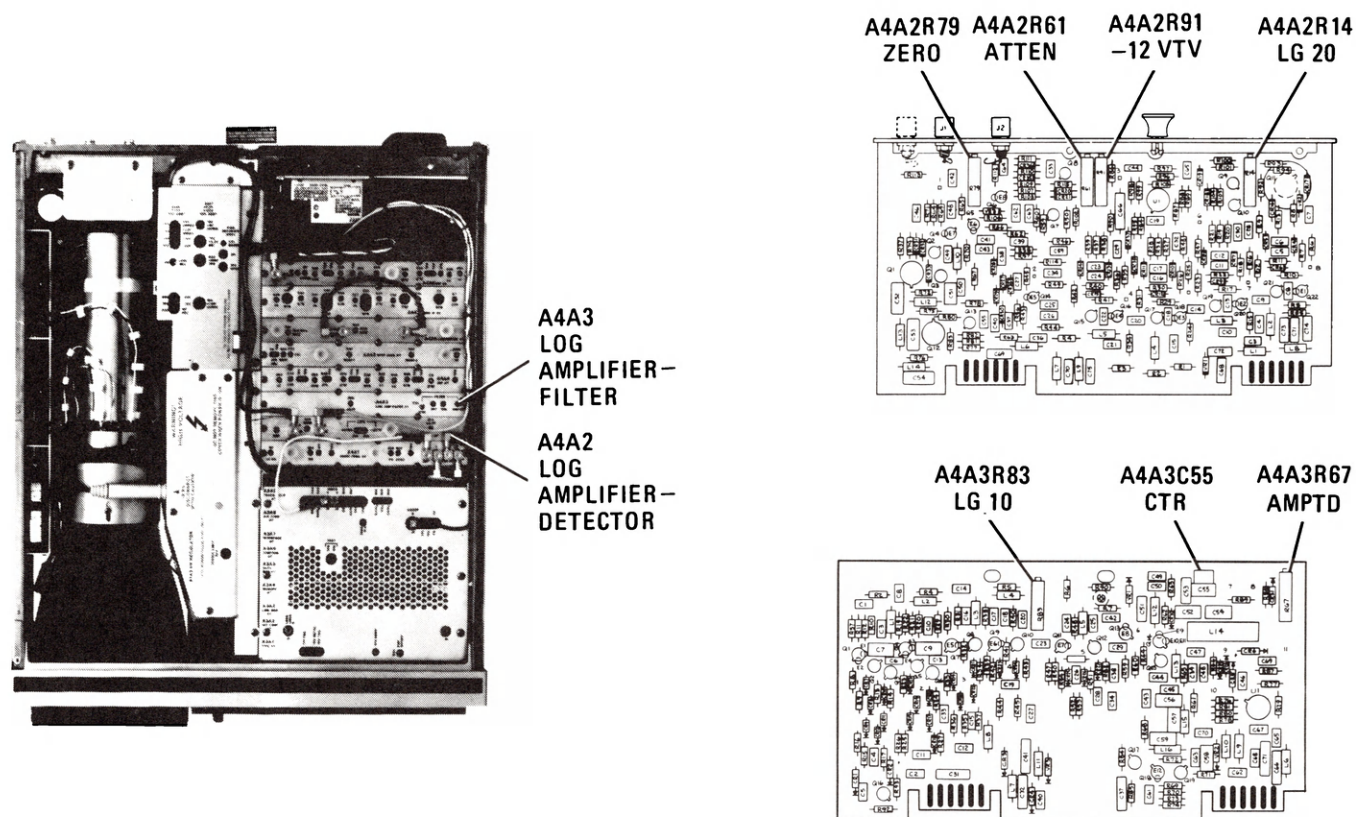


Figure 5-20. Location of Log Amplifier Adjustments

5-19. LOG AMPLIFIER ADJUSTMENTS (Cont'd)

Bandpass Filter Amplitude Adjustment

9. Short A4A3TP7 to A4A3TP8 with a jumper wire. Note DVM indication.
10. Remove short from between A4A3TP7 and A4A3TP8.
11. Adjust A4A3R67 AMPTD for DVM indication the same as that noted in Step 9 ± 0.0005 Vdc. Refer to Figure 5-20 for location of adjustment. If unable to adjust AMPTD for proper indication, increase or decrease value of A4A3R66. Refer to Figure 5-20 for location of adjustment. If unable to adjust AMPTD for proper indication, increase or decrease value of A4A3R66. Refer to Table 5-3 for range of values.
12. Repeat Steps 9 through 11 until DVM indication is the same ± 0.0005 Vdc with A4A3TP7 shorted to A4A3TP8 and with A4A3TP7 and A4A3TP8 not shorted.

– 12 VTV and ATTEN Adjustments

13. Connect 10-dB Step Attenuator between Signal Generator and 8566A RF INPUT. Set Attenuator to 0 dB.
14. Press LIN pushbutton.
15. Adjust Signal Generator output level for DVM indication of $+1.000 \pm 0.002$ Vdc.
16. Press LOG ENTER
dB/DIV pushbutton.
17. Set Step Attenuator for 70 dB attenuation.
18. Adjust A4A2R91 –12 VTV for DVM indication of $+300 \pm 1$ mVdc. Refer to Figure 5-20 for location of adjustment.
19. Set Step Attenuator for 0 dB attenuation.
20. Adjust A4A2R61 ATTEN for DVM indication of $+1.000 \pm 0.001$ Vdc. Refer to Figure 5-20 for location of adjustment. If unable to adjust ATTEN for proper indication, increase or decrease value of A4A2R62. Refer to Table 5-3 for range of values.
21. Repeat Steps 17 through 20 until specifications of Steps 18 and 20 are achieved without further adjustment.

5-19. LOG AMPLIFIER ADJUSTMENTS (Cont'd)**Linear Gain Adjustments**

22. Press LIN pushbutton. DVM indication at A4A1TP1 should be $+1.000 \pm 0.020$ Vdc ($+0.980$ to $+1.020$ Vdc). If indication is not within this range, repeat steps 13 through 21. If indication is within this range, key in REFERENCE
LEVEL 0 dBm, set Step Attenuator to 10 dB, then adjust Signal Generator output level for DVM indication of $+1.000 \pm 0.001$ Vdc.
 23. Key in SHIFT ENTER
dB/DIV. This disables IF Step Gains.
 24. Verify ATTEN at 10 dB. Key in REFERENCE
LEVEL -60 dB. Set Step Attenuator to 20 dB.
 25. Adjust A4A3R83 LG10 for DVM indication of $+1.000 \pm 0.010$ Vdc. Refer to Figure 5-20 for location of adjustment. If unable to adjust LG10 for proper indication, increase or decrease value of A4A3R54. Refer to Table 5-3 for range of values.
 26. Set Step Attenuator for 30 dB attenuation.
 27. Key in REFERENCE
LEVEL -70 dB.
 28. Adjust A4A2R14 LG20 for DVM indication of $+1.000 \pm 0.010$ Vdc. Refer to Figure 5-20 for location of adjustment. If unable to adjust LG20 for proper indication, increase or decrease value of A4A2R18. Refer to Table 5-3 for range of values.
 29. Press 2-22
GHz pushbutton to re-enable IF Step Gains.
-

5-20. VIDEO PROCESSOR ADJUSTMENTS**REFERENCE:**

A4A1 Video Processor

RELATED PERFORMANCE TEST:

Log Scale Switching Uncertainty Test

DESCRIPTION:

The CAL OUTPUT signal is connected to the SIGNAL INPUT through a step attenuator. The instrument is placed in zero frequency span to produce a dc level output from the log amplifier and this dc level is regulated by regulating the input signal level and reference level. The offsets and gains on the A4A1 Video Processor are adjusted for proper levels using a DVM.

5-20. VIDEO PROCESSOR ADJUSTMENTS (Cont'd)

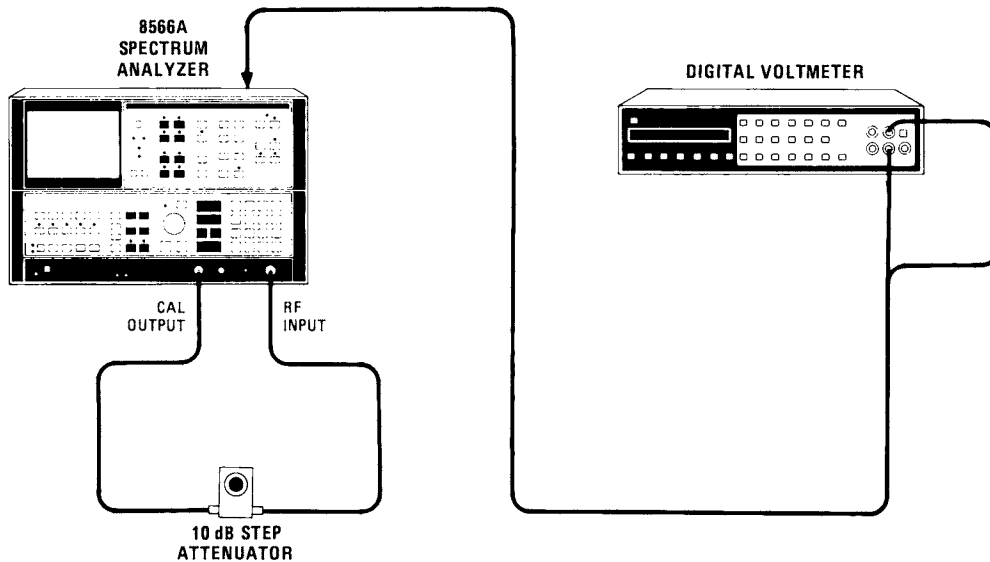


Figure 5-21. Video Processor Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM) HP 3455A
 10-dB Step Attenuator HP 355D

PROCEDURE:

1. Position instrument upright as shown in Figure 5-15 and remove top cover.
2. Set LINE switch to ON and press **INSTR PRESET** pushbutton.
3. Connect DVM to A4A1TP1.
4. Connect CAL OUTPUT to RF INPUT through 10-dB step attenuator.
5. Key in **CENTER FREQUENCY** 100 MHz and **FREQUENCY SPAN** 0 Hz. Press LIN.
6. Set step attenuator to 120 dB. DVM indication should be 0.000 ± 0.001 Vdc.
7. Connect DVM to A4A1TP2.
8. Adjust A4A1R14 OS for DVM indication of -5.000 ± 0.003 Vdc. Refer to Figure 5-22 for location of adjustment.
9. Connect DVM to A4A1TP1.

5-20. VIDEO PROCESSOR ADJUSTMENTS (Cont'd)

10. Set step attenuator to 0 dB.
11. Key in REFERENCE
LEVEL and adjust DATA knob for DVM indication as close to $+1.000 \pm 0.001$ Vdc as possible. Press RES
BW key and, using step down key ↓, decrease resolution bandwidth until DVM indication is $+1.000 \pm 0.001$ Vdc.
12. Connect DVM to A4A1TP3.
13. Adjust A4A1R36 FS for DVM indication of $+2.000 \pm 0.001$ Vdc. Refer to Figure 5-22 for location of adjustment.
14. Set step attenuator to 120 dB.
15. Adjust A4A1R32 ZERO for DVM indication of 0.000 ± 0.001 Vdc. Refer to Figure 5-22 for location of adjustment.

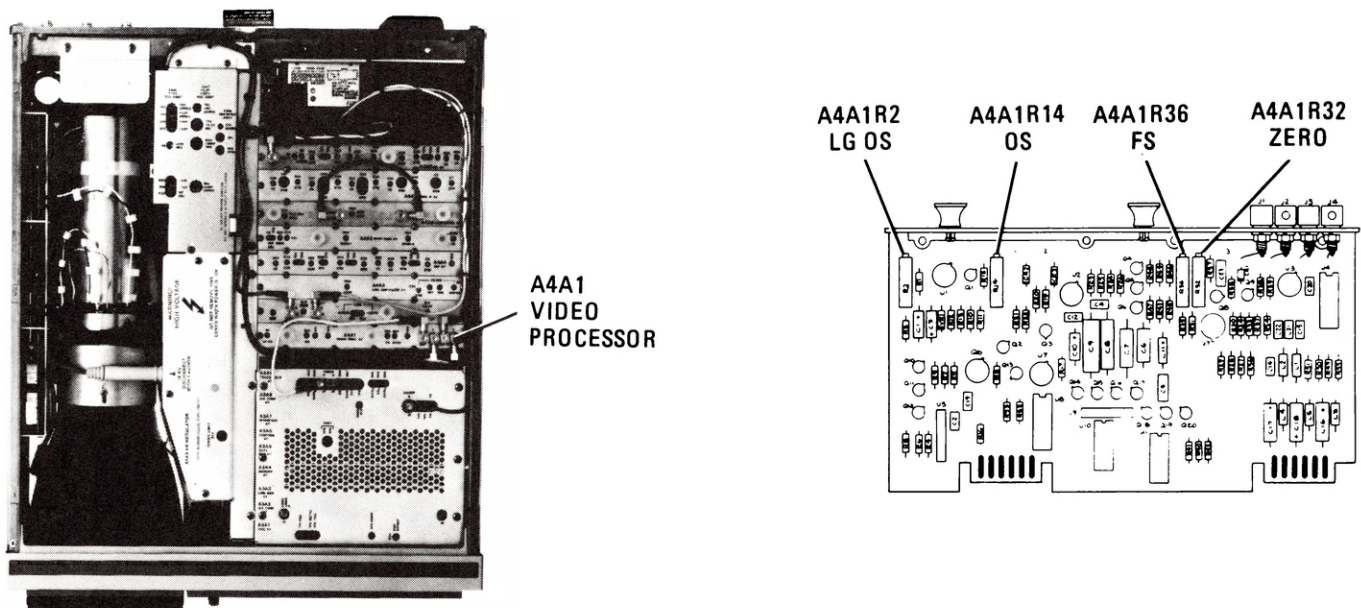


Figure 5-22. Location of Video Processor Adjustments

16. Set step attenuator to 0 dB.
17. Repeat Steps 13 through 16 until specifications of Steps 13 and 15 are met.
18. Set step attenuator to 40 dB.
19. Key in LOG ENTER
dB/DIV, SHIFT LOG ENTER
dB/DIV, REFERENCE
LEVEL - 50 dB.

ADJUSTMENTS

5-20. VIDEO PROCESSOR ADJUSTMENTS (Cont'd)

20. Connect DVM to A4A1TP1. Record DVM indication. Indication should be approximately +0.500 Vdc.
21. Decrease reference level to – 60 dB using the step key.
22. Adjust A4A1R2 LG OS for DVM indication of $+0.100 \pm 0.001$ Vdc greater than the DVM indication recorded in Step 20. Refer to Figure 5-22 for location of adjustment.
23. Decrease reference level to – 70 dB using the step key.
24. DVM indication should be $+0.200 \pm 0.002$ Vdc greater than the DVM indication recorded in Step 20. If not, readjust A4A1R2 LG OS.
25. Decrease reference level to – 90 dB using the step key.
26. DVM indication should be $+0.400 \pm 0.004$ Vdc greater than the indication recorded in Step 20. If not, readjust A4A1R2 LG OS.
27. Repeat Steps 21 through 26 until specifications of Steps 22, 24, and 26 are met.

5-21. 3 MHz BANDWIDTH FILTER ADJUSTMENTS

REFERENCE:

A4A7 3 MHz Bandwidth Filter

RELATED PERFORMANCE TEST:

Resolution Bandwidth Switching Uncertainty Test
Resolution Bandwidth Selectivity Test

DESCRIPTION:

A stable 21.4 MHz (IF Frequency) signal is applied to the IF section of the instrument from a tracking generator. Each of the first four stages of the 3 MHz Bandwidth Filter is peaked in a 10 Hz bandwidth using an oscilloscope display. The last stage is peaked using the CRT display of the 8566A Spectrum Analyzer. The tracking generator output is then disconnected from the IF section of the instrument, the original cable reconnected, and the CAL OUTPUT signal connected to the RF INPUT. Each of the five stages of the 3 MHz Bandwidth Filter is then adjusted for center and symmetry. Four crystal filter bypass networks are required for alignment of the filter stages. Refer to Figure 5-79 for information concerning the bypass networks.

5-21. 3 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

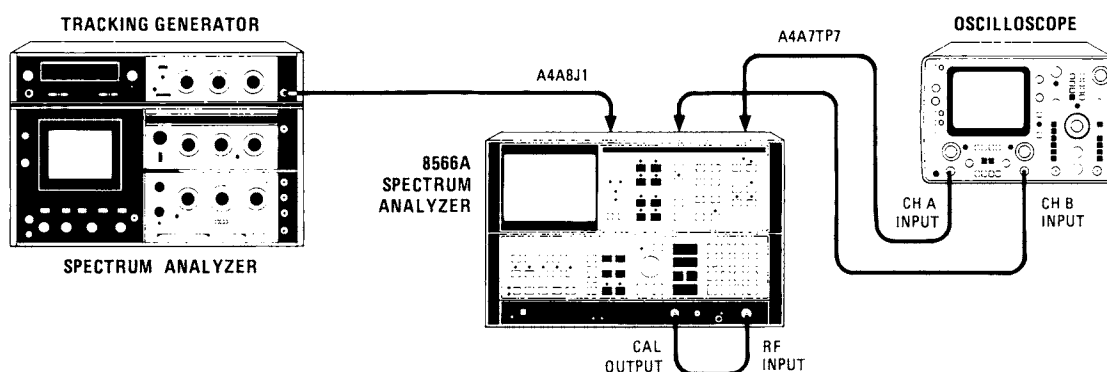


Figure 5-23. 3 MHz Bandwidth Filter Adjustments Setup

EQUIPMENT:

Spectrum Analyzer/Tracking Generator HP 141T/8552B/8553B/8443A
 Oscilloscope HP 1741A
 Crystal Filter Bypass Network (4 required) Refer to Figure 5-79
 Test Cable: BNC to SMB snap-on Part of Service Accessories

PROCEDURE:

1. Position instrument upright as shown in Figure 5-23 and remove top cover.
2. Set LINE switch to ON and press **2-22 GHz** pushbutton.


Frequency Zero Check

3. Connect CAL OUTPUT signal to RF INPUT.
4. Key in **CENTER FREQUENCY** 100 MHz, **RES BW** 100 Hz, **FREQUENCY SPAN** 5 kHz.
5. Adjust front-panel FREQ ZERO control if necessary to center signal on center graticule line.

Filter Peak Adjust

6. Press **2-22 GHz**.
7. Key in **SWEEP TIME** 20 msec, **RES BW** 10 Hz, **REFERENCE LEVEL** -30 dBm.

5-21. 3 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

8. Disconnect 97 (white/violet) cable from A4A8J1 and connect output of tracking generator to A4A8J1 using BNC to SMB snap-on cable.
9. Set spectrum analyzer SCAN WIDTH PER DIVISION to 20 kHz and red scan width knob to ZERO. Set TUNING STABILIZER switch to ON. Set tracking generator output level to -25 dBm and tune spectrum analyzer FREQUENCY for a tracking generator output frequency of 21.4000 MHz.
10. Connect oscilloscope Channel A probe to A4A7TP7 (left side of C14 SYM) and Channel B probe to A4A7TP5 (left side of C23 SYM).
11. Set oscilloscope DISPLAY switch to CHOP and VOLTS/DIV to .005 for both Channel A and Channel B inputs.
12. Adjust tracking generator output frequency to peak Channel A display.
13. Adjust A4A7C13 PK for maximum peak-to-peak signal on Channel B display. Refer to Figure 5-24 for location of adjustment. If unable to achieve a "peak" in signal amplitude, increase or decrease value of A4A7C12. Refer to Table 5-3 for range of values.
14. Move Channel B probe to A4A7TP3 (left side of C32 SYM).
15. Adjust tracking generator output frequency to peak Channel A display.
16. Adjust A4A7C22 PK for maximum peak-to-peak signal on Channel B display. Refer to Figure 5-24 for location of adjustment. If unable to achieve a "peak" in signal amplitude, increase or decrease value of A4A7C21. Refer to Table 5-3 for range of values.
17. Move Channel B probe to A4A7TP1 (left side of C41 SYM).
18. Adjust tracking generator output frequency to peak Channel A display.
19. Adjust A4A7C31 PK for maximum peak-to-peak signal on Channel B display. Refer to Figure 5-24 for location of adjustment. If unable to achieve a "peak" in signal amplitude, increase or decrease value of A4A7C30. Refer to Table 5-3 for range of values.
20. Disconnect Channel B probe from A4A7TP1.
21. Adjust tracking generator output frequency to peak Channel A display.
22. Adjust  using step keys to place signal near top of graticule.
23. Adjust A4A7C40 PK for maximum signal amplitude on 8566A CRT display. Refer to Figure 5-24 for location of adjustment. If unable to achieve a "peak" in signal amplitude, increase or decrease value of A4A7C39. Refer to Table 5-3 for range of values.

ADJUSTMENTS

5-21. 3 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

24. Disconnect Channel A probe from A4A7TP7. Disconnect tracking generator output from A4A8J1 and reconnect 97 cable.

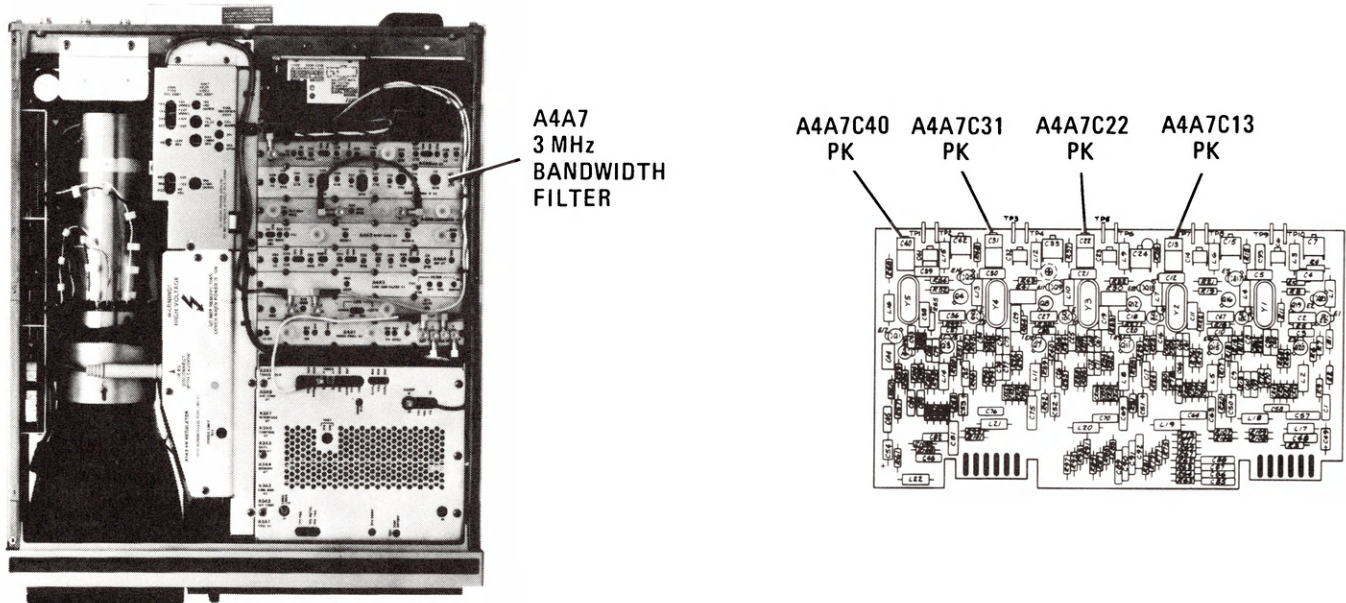


Figure 5-24. Location of 3 MHz PEAK Adjustments

Filter Center and Symmetry Adjustments

25. Key in **CENTER FREQUENCY** 100 MHz, **FREQUENCY SPAN** 10 kHz, **ATTEN** 0 dB, **RES BW** 1 kHz and press LIN pushbutton. Press **REFERENCE LEVEL** and adjust reference level using step keys to place signal peak near top of graticule.
26. Connect crystal filter bypass networks between A4A7TP1 and A4A7TP2, A4A7TP3 and A4A7TP4, A4A7TP5 and A4A7TP6, and A4A7TP7 and A4A7TP8.
27. Adjust A4A7C7 CTR for minimum amplitude signal peak. Adjust A4A7C6 SYM for best symmetry of signal. Repeat adjustments to ensure that signal is nulled and adjusted for best symmetry. Refer to Figure 5-25 for location of adjustments.
28. Remove crystal filter bypass network from between A4A7TP7 and A4A7TP8.
29. Adjust A4A7C15 CTR for minimum amplitude of signal peak. Adjust A4A7C14 SYM for best symmetry of signal. Repeat adjustments to ensure that signal is nulled and adjusted for best symmetry. Refer to Figure 5-25 for location of adjustments.
30. Remove crystal filter bypass network from between A4A7TP5 and A4A7TP6.

ADJUSTMENTS

5-21. 3 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

31. Adjust A4A7C24 CTR for minimum amplitude of signal peak. Adjust A4A7C23 SYM for best symmetry of signal. Repeat adjustments to ensure that signal is nulled and adjusted for best symmetry. Refer to Figure 5-25 for location of adjustments.
32. Remove crystal filter bypass network from between A4A7TP3 and A4A7TP4.
33. Adjust A4A7C33 CTR for minimum amplitude of signal peak. Adjust A4A7C32 SYM for best symmetry of signal. Repeat adjustments to ensure that signal is nulled and adjusted for best symmetry. Refer to Figure 5-25 for location of adjustments.

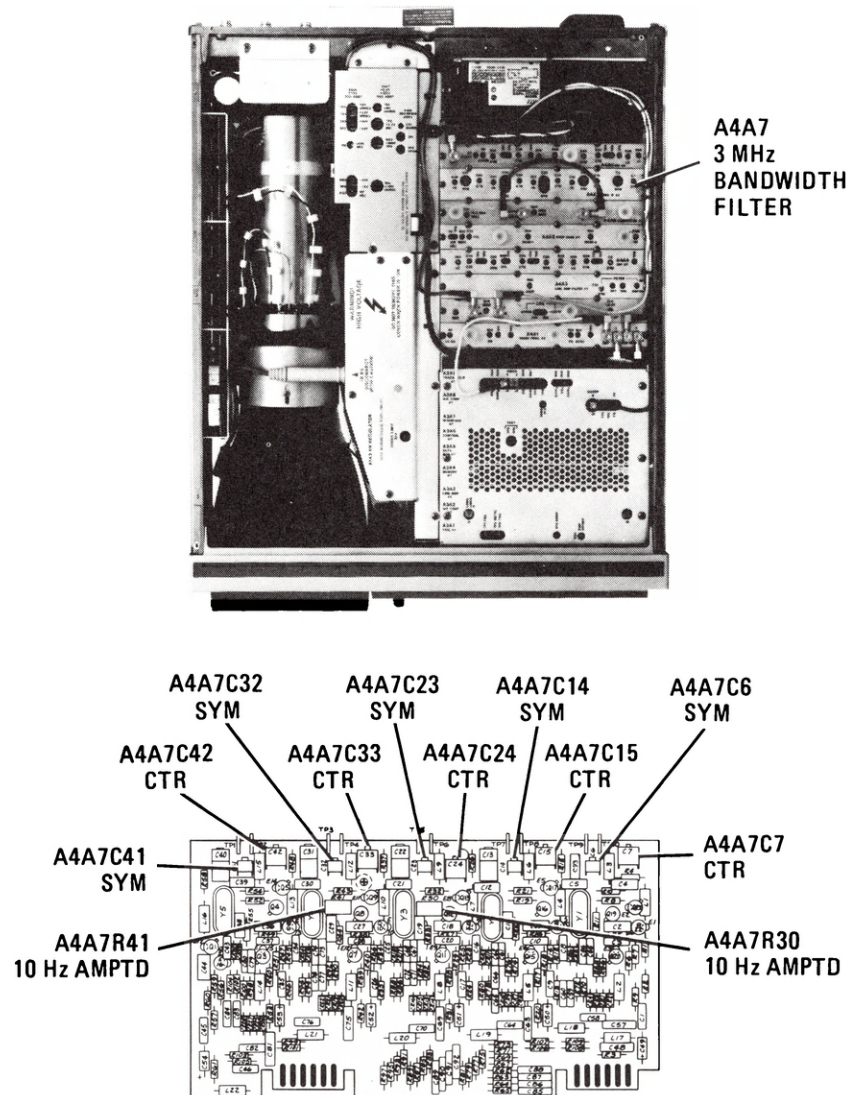





Figure 5-25. Location of CENTER, SYMMETRY, and 10 Hz AMPLITUDE Adjustments

ADJUSTMENTS

5-21. 3 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

34. Remove crystal filter bypass network from between A4A7TP1 and A4A7TP2.
35. Adjust A4A7C42 CTR for minimum amplitude of signal peak. Adjust A4A7C41 SYM for best symmetry of signal. Repeat adjustments to ensure that the signal is nulled and adjusted for best symmetry. Refer to Figure 5-25 for location of adjustments.
36. Readjust A4A7C7 CTR to be sure that signal is nulled. Signal should be centered on center graticule line on CRT display. If signal is not centered, go back to Step 20 and repeat adjustments of each filter stage.

10 Hz Amplitude Adjustments

37. Adjust signal peak to a convenient reference level by pressing  and adjusting DATA knob.
38. Key in  0 Hz,  10 Hz.
39. Adjust A4A7R30 10 Hz AMPTD and A4A7R41 10 Hz AMPTD equal amounts to set signal level the same as reference established in Step 31. The 10 Hz adjustments are located beneath SYM adjustments C23 and C32. Always adjust both controls in approximately equal amounts. For example, if error is 0.5 dB, adjust one control until error is 0.25 dB then other control until error is 0 dB.

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS

REFERENCE:

A4A8 Attenuator-Bandwidth Filter
A4A4 Bandwidth Filter

RELATED PERFORMANCE TESTS:

IF Gain Uncertainty Test
Resolution Bandwidth Switching Uncertainty Test
Resolution Bandwidth Selectivity Test

DESCRIPTION:

First, the 10-dB and 20-dB attenuators on the A4A8 Attenuator—Bandwidth Filter are adjusted for the proper amount of attenuation. This is done by connecting the CAL OUTPUT signal to the RF INPUT through two step attenuators, keying in the necessary reference level to activate the 10-dB and the 20-dB control lines, adjusting the step attenuators to compensate for the attenuation, and adjusting the attenuators for the proper amount of attenuation.

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

Next, the crystal filter poles on the A4A4 Bandwidth Filter are adjusted for center and symmetry by bypassing all but one pole at a time and adjusting the active pole.

The LC filters are then adjusted on both the A4A4 Bandwidth Filter and the A4A8 Attenuator—Bandwidth Filter.

Last, the crystal filter poles on the A4A8 Attenuator—Bandwidth Filter are adjusted for center and symmetry in the same manner as the poles on the A4A4 Bandwidth Filter.

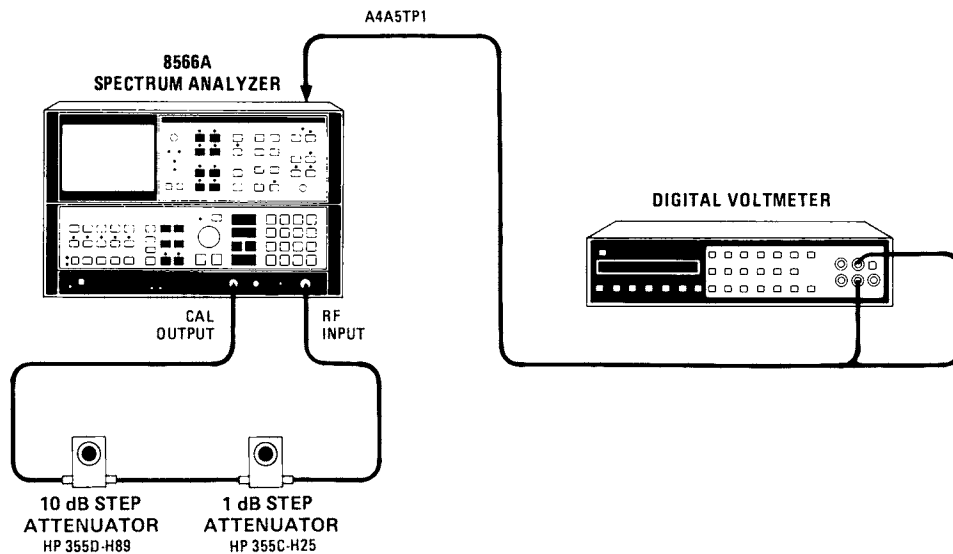


Figure 5-26. 21.4 MHz Bandwidth Filter Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM)	HP 3455A
10-dB Step Attenuator	HP 355D, Option H89
1-dB Step Attenuator	HP 355C, Option H25
Crystal Filter Bypass Network (2 required)	Refer to Figure 5-79

PROCEDURE:

1. Position instrument upright as shown in Figure 5-26 and remove top cover.
2. Set LINE switch to ON and press 2-22
GHz pushbutton.

+ 10V Temperature Compensation Supply Check

3. Connect DVM to A4A5TP1 (+ 10VF).

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

4. DVM indication should be between +8.5 Vdc and +11.0 Vdc. If voltage is within tolerance, proceed to next step. If voltage is not within tolerance, refer to Paragraph 5-24 for adjustment procedure.

A10 dB and A20 dB Adjustments

5. Connect CAL OUTPUT to RF INPUT through 1-dB and 10-dB step attenuators. Set step attenuators to 25 dB.
6. Key in 100 MHz, 3 kHz, 1 kHz, 0 dB, and - 30 dBm.
7. Key in LOG 1 dB then press MARKER .
8. Key in - 20 dBm. Set step attenuators to 15 dB.
9. Adjust A4A8R7 A10 dB to align markers on display. Marker Δ level should indicate .00 dB. Refer to Figure 5-29 for location of adjustment.
10. Key in - 10 dBm. Set step attenuators to 5 dB.
11. Adjust A4A8R6 A20 dB to align markers on display. Marker Δ level should indicate .00 dB. Refer to Figure 5-29 for location of adjustment.

A4A4 XTAL Adjustments

12. Set step attenuators to 0 dB. Press MARKER .
13. Disconnect 97 (white/violet) cable from A4A8J1 and connect to A4A6J1.
14. Key in 30 kHz, 100 kHz, and press LIN pushbutton.
15. Press pushbutton and adjust DATA knob to set signal peak on screen near top of graticule.
16. Connect crystal filter bypass networks between A4A4TP1 and A4A4TP2 and between A4A4TP4 and A4A4TP5.
17. Adjust A4A4C20 CTR to center signal on center graticule line. Adjust A4A4C9 SYM for best symmetry of signal. Refer to Figure 5-27 for location of adjustments. If unable to adjust SYM for satisfactory signal symmetry, increase or decrease value of A4A4C10. Refer to Table 5-3 for range of values.
18. Remove crystal filter bypass network from between A4A4TP4 and A4A4TP5.

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

19. Adjust A4A4C74 CTR to center signal on center graticule line. Adjust A4A4C39 SYM for best symmetry of signal. Refer to Figure 5-27 for location of adjustments. If unable to adjust SYM for satisfactory signal symmetry, increase or decrease value of A4A4C38. Refer to Table 5-3 for range of values.
20. Remove crystal filter bypass network from between A4A4TP1 and A4A4TP2.
21. Adjust A4A4C73 CTR to center signal on center graticule line. Adjust A4A4C65 SYM for best symmetry of signal. Refer to Figure 5-27 for location of adjustments. If unable to adjust SYM for satisfactory signal symmetry, increase or decrease value of A4A4C66. Refer to Table 5-3 for range of values.
22. All crystal filter bypass networks are removed. Signal should be centered and symmetrical. If not, go back to Step 16 and repeat adjustments.
23. Press MARKER Δ pushbutton.
24. Key in FREQUENCY
SPAN 20 kHz, RES
BW 3 kHz.
25. Adjust A4A4R49 XTAL to align markers on display. MARKER Δ level should indicate 1.00 X. Refer to Figure 5-27 for location of adjustment.

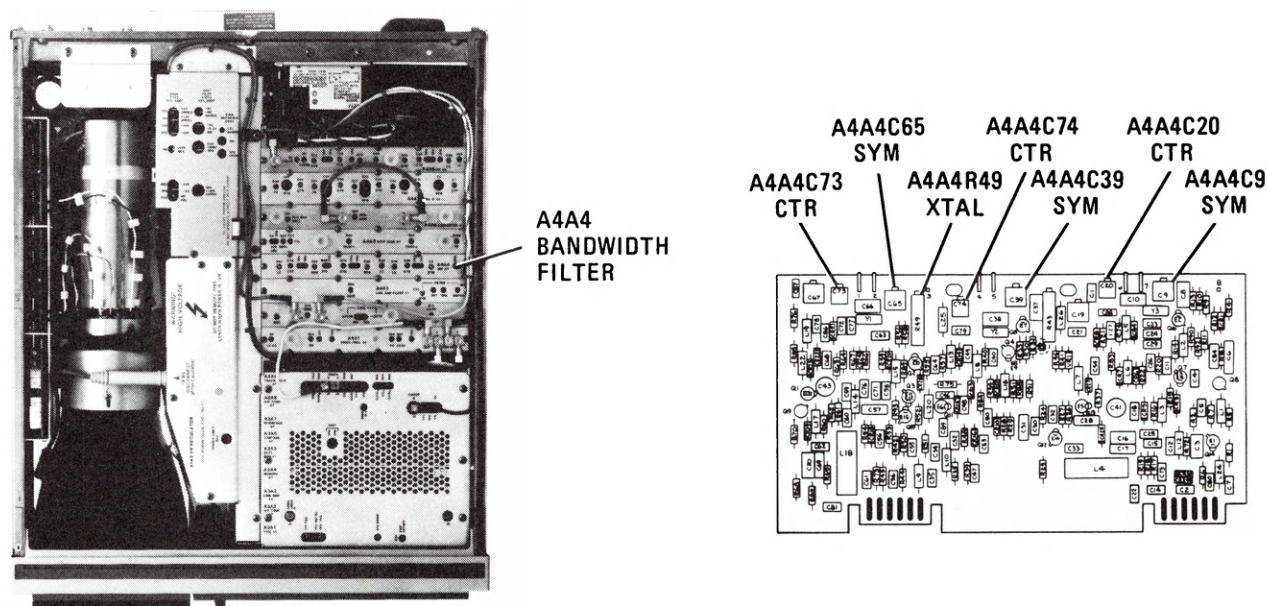


Figure 5-27. Location of A4A4 21.4 MHz Crystal Filter Adjustments

ADJUSTMENTS

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

A4A4 LC Adjustments

26. Key in 1 MHz, 200 kHz, MARKER .
27. Short A4A9TP1 to A4A9TP2.
28. Adjust A4A4C67 LC CTR and A4A4C19 LC CTR for maximum MARKER level as indicated by CRT annotation. Refer to Figure 5-28 for location of adjustments. If unable to adjust LC CTR adjustments for satisfactory signal amplitude, increase or decrease value of A4A4C17 and A4A4C70. Refer to Table 5-3 for range of values.
29. Remove short from between A4A9TP1 and A4A9TP2.
30. Press MARKER pushbutton.
31. Reinstall short between A4A9TP1 and A4A9TP2.
32. Adjust A4A4R43 LC to align markers on display. MARKER Δ level should indicate 1.00 X. Refer to Figure 5-28 for location of adjustment.

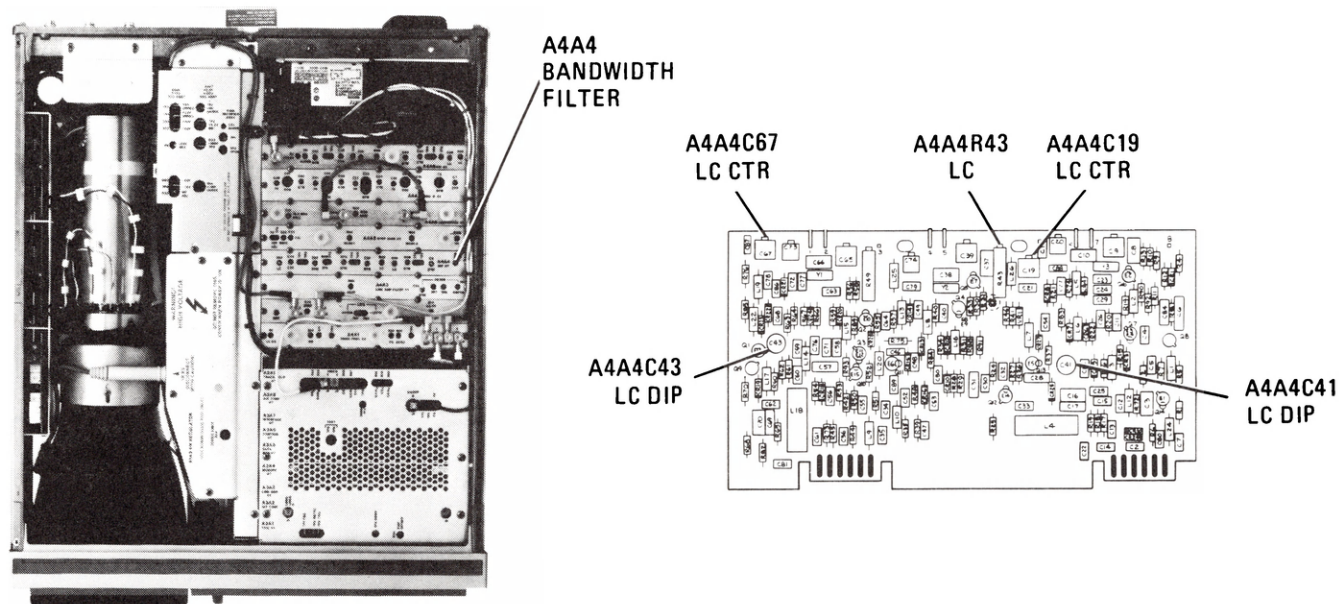






Figure 5-28. Location of A4A4 21.4 MHz LC Filter Adjustments

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

A4A8 LC Adjustments

33. Disconnect 97 cable from A4A6J1 and reconnect to A4A8J1. Reconnect cable to A4A6J1.
34. Press  pushbutton and adjust DATA knob to place signal peak near top of graticule.
35. Press MARKER .
36. Adjust A4A8C32 LC CTR and A4A8C46 LC CTR for maximum MARKER level as indicated by CRT annotation. Refer to Figure 5-29 for location of adjustments. If unable to adjust LC CTR adjustments for satisfactory signal amplitude, increase or decrease value of A4A8C35 and A4A8C49. Refer to Table 5-3 for range of values.
37. Remove short from between A4A9TP1 and A4A9TP2.
38. Press MARKER .
39. Reinstall short between A4A9TP1 and A4A9TP2.
40. Adjust A4A8C35 LC to align markers on display. MARKER Δ level should indicate 1.00 X. Refer to Figure 5-29 for location of adjustment.
41. Remove short from between A4A9TP1 and A4A9TP2.
42. Press MARKER .

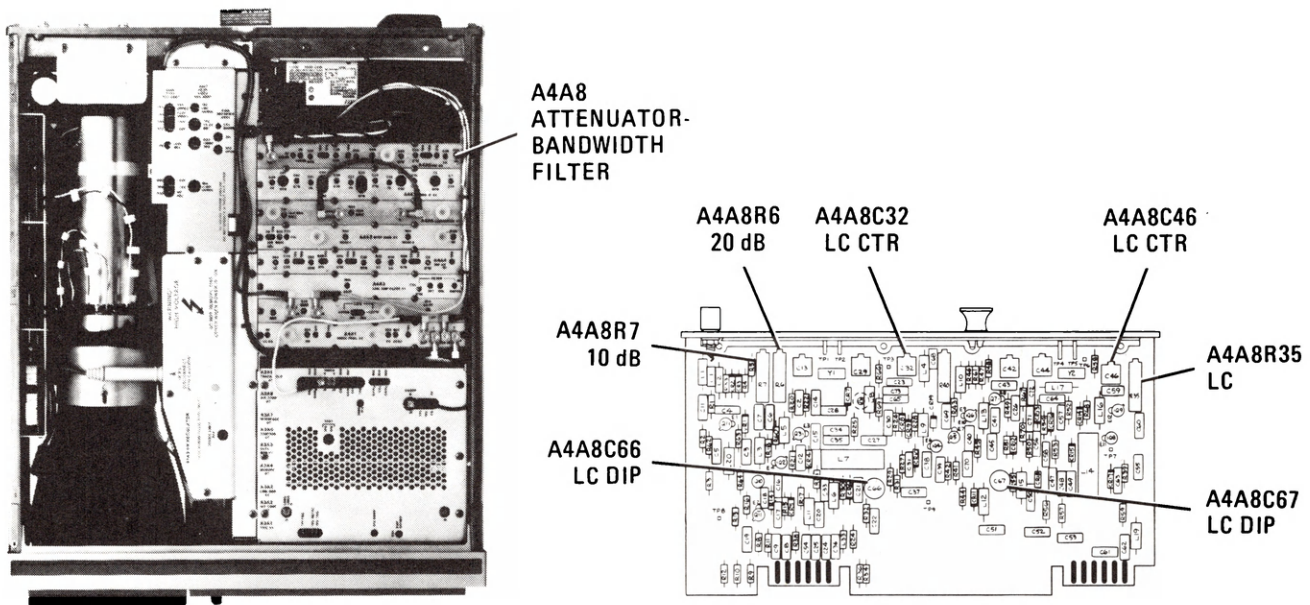








Figure 5-29. Location of A4A8 21.4 MHz LC Filter and Attenuation Adjustments

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

A4A8 XTAL Adjustments

43. Key in  30 kHz,  100 kHz.
44. Connect crystal filter bypass network between A4A8TP1 and A4A8TP2.
45. Adjust A4A8C44 CTR to center signal on center graticule line. Adjust A4A8C42 SYM for best symmetry of signal. Refer to Figure 5-30 for location of adjustments. If unable to adjust SYM for satisfactory signal symmetry, increase or decrease value of A4A8C14. Refer to Table 5-3 for range of values.
46. Remove crystal filter bypass network from between A4A8TP1 and A4A8TP2 and connect between A4A8TP4 and A4A8TP5.
47. Adjust A4A8C29 CTR to center signal on center graticule line. Adjust A4A8C13 SYM for best symmetry of signal. Refer to Figure 5-30 for location of adjustments. If unable to adjust SYM for satisfactory signal symmetry, increase or decrease value of A4A8C14. Refer to Table 5-3 for range of values.
48. Remove crystal filter bypass network connected between A4A8TP4 and A4A8TP5.
47. Key in  10 kHz.
48. Press MARKER  pushbutton.
49. Key in  3 kHz.
52. Adjust A4A8R40 XTAL to align markers on display. MARKER  level should indicate 1.00 X. Refer to Figure 5-30 for location of adjustment.

LC DIP Adjustments

53. Refer to Section IV, RESOLUTION BANDWIDTH SWITCHING UNCERTAINTY TEST, and check all bandwidth amplitudes. If amplitude of 300 kHz bandwidth is low but amplitude of 100 kHz and 1 MHz are within tolerance, LC DIP adjustments must be performed. If all bandwidth amplitudes are within tolerance, do not perform the following adjustments.
54. Disconnect 97 (white/violet) cable from A4A8J1 and connect to A4A6J1.
55. Remove A4A4 Bandwidth Filter and install on extenders.

ADJUSTMENTS

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

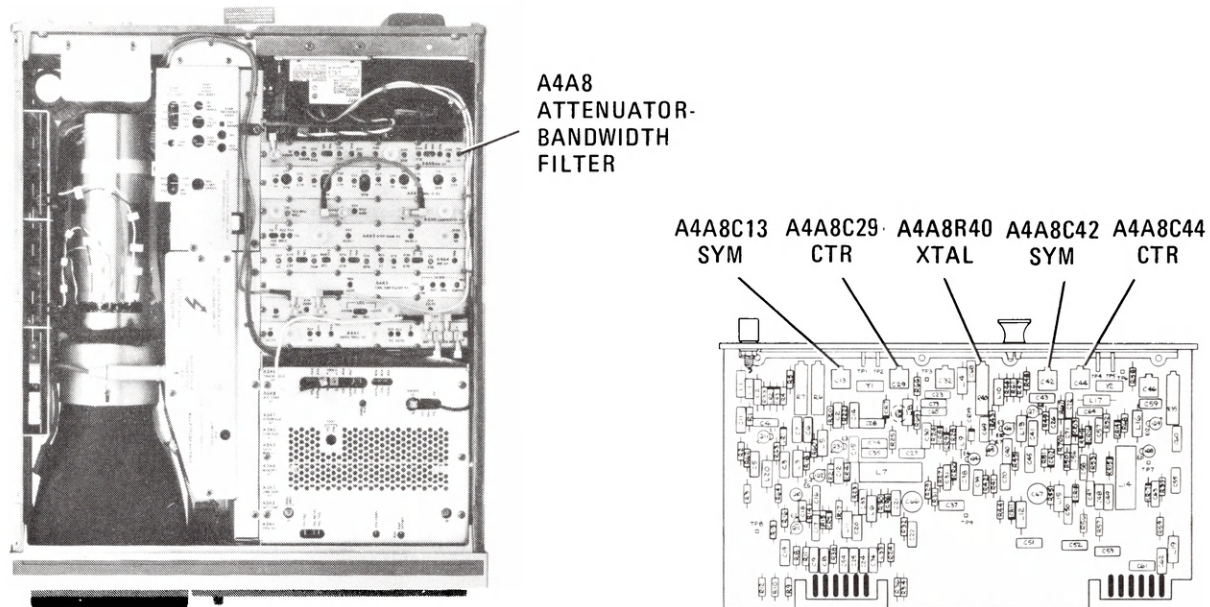


Figure 5-30. Location of A4A8 21.4 MHz Crystal Filter Adjustments

56. Key in RES BW 100 kHz, FREQUENCY SPAN 1 MHz, and LOG ENTER dB/DIV 2 dB.
57. Short A4A9TP1 to A4A9TP2. Short A4A4TP3 to ground.
58. Adjust A4A4C41 LC DIP for minimum amplitude of signal peak. Refer to Figure 5-28 for location of adjustment. If unable to achieve a “dip” in signal amplitude, increase or decrease value of A4A4R16. Refer to Table 5-3 for range of values.
59. Remove short from A4A4TP3 and short A4A4TP8 to ground.
60. Adjust A4A4C43 LC DIP for minimum amplitude of signal peak. Refer to Figure 5-28 for location of adjustment. If unable to achieve a “dip” in signal amplitude, increase or decrease value of A4A4R60. Refer to Table 5-3 for range of values.
61. Install A4A4 Bandwidth Filter without extenders. Short A4A4TP3 and A4A4TP8 to ground. Install A4A8 Attenuator—Bandwidth Filter on extenders and reconnect 97 cable to A4A8J1. Reconnect cable to A4A6J1.
62. Short A4A8TP6 to ground.
63. Adjust A4A8C66 LC DIP for minimum amplitude of signal peak. Refer to Figure 5-29 for location of adjustment. If unable to achieve a “dip” in signal amplitude, increase or decrease value of A4A8R30. Refer to Table 5-3 for range of values.

ADJUSTMENTS

5-22. 21.4 MHz BANDWIDTH FILTER ADJUSTMENTS (Cont'd)

64. Remove short from A4A8TP6 and short A4A8TP3 to ground.
 65. Adjust A4A8C67 LC DIP for minimum amplitude of signal peak. Refer to Figure 5-29 for location of adjustment. If unable to achieve a “dip” in signal amplitude, increase or decrease value of A4A8R55. Refer to Table 5-3 for range of values.
 66. Install A4A8 Attenuator—Bandwidth Filter in instrument without extenders. Remove short from A4A8TP3.
 67. Go back to Step 26 and repeat LC adjustments for both the A4A4 Bandwidth Filter and the A4A8 Attenuator—Bandwidth Filter.
-

5-23. 3-dB BANDWIDTH ADJUSTMENTS

REFERENCE:

A4A9 IF Control

RELATED PERFORMANCE TEST:

Resolution Bandwidth Accuracy Test





DESCRIPTION:

The CAL OUTPUT signal is connected to the RF INPUT. Each of the adjustable resolution bandwidths is selected and adjusted for the proper bandwidth at the 3-dB point.

EQUIPMENT:

No test equipment is required for this adjustment.

PROCEDURE:

1. Position instrument upright and remove top cover.
 2. Set LINE switch to ON and press  pushbutton.
 3. Connect CAL OUTPUT to RF INPUT.
 4. Key in  100 MHz,  5 MHz, LIN, and  3 MHz.
-

ADJUSTMENTS

5-23. 3-dB BANDWIDTH ADJUSTMENTS (Cont'd)

5. Press pushbutton and adjust DATA knob to place signal peak near top of graticule. Signal should be centered about the center line on the graticule. If not, press and use DATA knob to center signal.
6. Press MARKER pushbutton.
7. Using DATA knob, adjust marker down one side of the displayed signal to the 3-dB point; CRT MKR Δ annotation indicates .707 X.
8. Adjust A4A9R60 3 MHz for MKR Δ indication of 1.5 MHz while maintaining marker at 3-dB point (.707 X) using DATA knob. Refer to Figure 5-31 for location of adjustment.
9. Press MARKER pushbutton. Adjust marker to 3-dB point on opposite side of signal (CRT MKR Δ annotation indicates 1.00X). There are now two markers; one on each side of the signal at the 3-dB points.
10. CRT MKR Δ annotation now indicates the 3-dB bandwidth of the 3 MHz bandwidth. 3-dB bandwidth should be 3.00 MHz \pm 0.60 MHz.
11. Key in 1 MHz and 2 MHz. Readjust and if necessary using DATA Knob to place signal peak near top of graticule and centered on center graticule line.
12. Press MARKER then MARKER .
13. Using DATA knob, adjust marker down one side of the displayed signal to the 3-dB point; CRT MKR Δ annotation indicates .707 X.
14. Adjust A4A9R61 1 MHz for MKR Δ indication of 500 kHz while maintaining marker at 3-dB point (.707 X) using DATA knob. Refer to Figure 5-31 for location of adjustment.
15. Press MARKER pushbutton. Adjust marker to 3-dB point on opposite side of signal (CRT MKR Δ annotation indicates 1.00 X). There are now two markers; one on each side of the signal at the 3-dB point.
16. CRT MKR Δ annotation now indicates the 3-dB bandwidth of the 1 MHz bandwidth. 3-dB bandwidth should be 1.00 \pm 0.10 MHz.
17. Key in 300 kHz and 500 kHz. Readjust and if necessary using DATA knob to place signal peak near top of graticule and centered on center graticule line.
18. Press MARKER then MARKER .

ADJUSTMENTS

5-23. 3-dB BANDWIDTH ADJUSTMENTS (Cont'd)

19. Using DATA knob, adjust marker down one side of the displayed signal to the 3-dB point; CRT MKR Δ annotation indicates .707 X.
 20. Adjust A4A9 300 kHz A4A9R62 for MKR Δ indication of 150 kHz while maintaining marker at 3-dB point (.707 X) using DATA knob. Refer to Figure 5-31 for location of adjustment.
 21. Press MARKER pushbutton. Adjust marker to 3-dB point on opposite side of signal (CRT MKR Δ annotation indicates 1.00 X).
 22. CRT MKR Δ annotation now indicates the 3-dB bandwidth of the 300 kHz bandwidth. 3-dB bandwidth should be 300.0 ± 30.0 kHz.
 23. Key in 10 kHz and 20 kHz. Readjust and if necessary using DATA knob to place signal peak near top of graticule and centered on center graticule line.
 24. Press MARKER then MARKER .
 25. Using DATA knob, adjust marker down one side of the displayed signal to the 3-dB point; CRT MKR Δ annotation indicates .707 X.
 26. Adjust A4A9R65 10 kHz for MKR Δ indication of 5.00 kHz while maintaining marker at 3-dB point (.707 X) using DATA knob. Refer to Figure 5-31 for location of adjustment.
 27. Press MARKER pushbutton. Adjust marker to 3-dB point on opposite side of signal (CRT MKR Δ annotation indicates 1.00 X).
 28. CRT MKR Δ annotation now indicates the 3-dB bandwidth of the 10 kHz bandwidth. 3-dB bandwidth should be 10.0 ± 1.0 kHz.
 29. Key in 3 kHz and 5 kHz. Readjust and if necessary using DATA knob to place signal peak near top of graticule and centered on center graticule line.
 30. Press MARKER then MARKER .
 31. Using DATA knob, adjust marker down one side of the displayed signal to the 3-dB point; CRT MKR Δ annotation indicates .707 X.
 32. Adjust A4A9R66 3 kHz for MKR Δ indication of 1.5 kHz while maintaining marker at 3-dB point (.707 X) using DATA knob. Refer to Figure 5-31 for location of adjustments.
 33. Press MARKER pushbutton. Adjust marker to 3-dB point on opposite side of signal (CRT MKR Δ annotation indicates 1.00 X).
 34. CRT MKR Δ annotation now indicates the 3-dB bandwidth of the 3 kHz bandwidth. 3-dB bandwidth should be 3.00 ± 0.30 kHz.
-

ADJUSTMENTS

5-23. 3-dB BANDWIDTH ADJUSTMENTS (Cont'd)

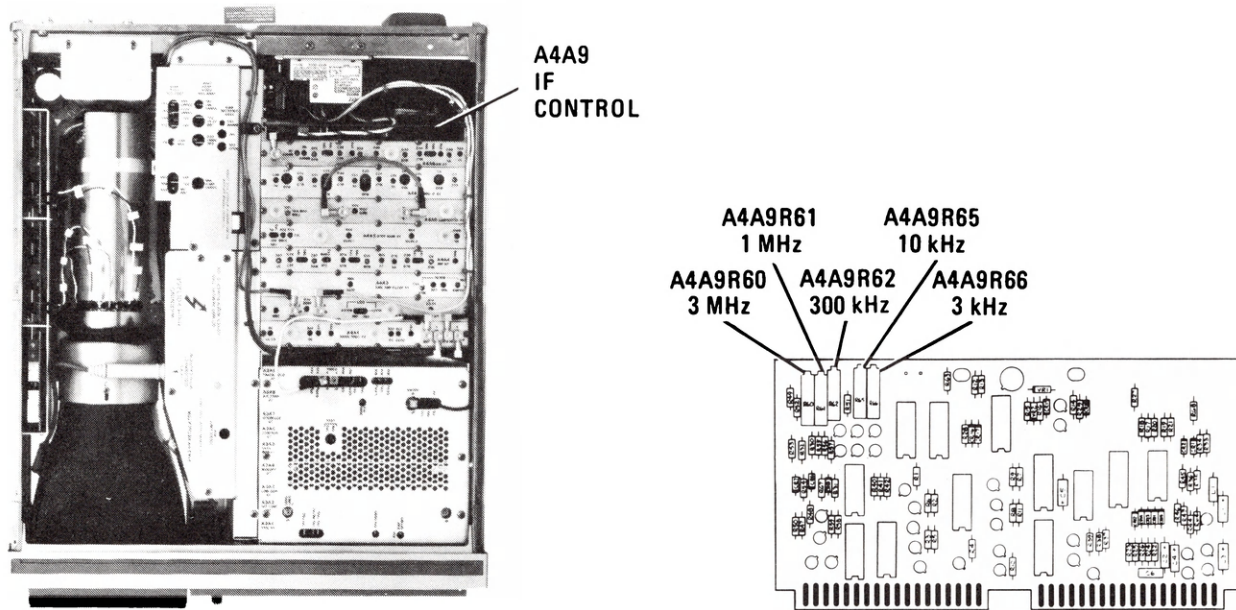


Figure 5-31. Location of 3-dB Bandwidths Adjustments

5-24. STEP GAIN AND 18.4 MHz LOCAL OSCILLATOR ADJUSTMENTS

REFERENCE:

A4A7 3 MHz Bandwidth Filter

A4A5 Step Gain

RELATED PERFORMANCE TESTS:

Resolution Bandwidth Selectivity Test

IF Gain Uncertainty Test

Center Frequency Readout Accuracy Test

DESCRIPTION:

First, the IF signal from the RF Section is measured with a power meter and adjusted for proper level. Next, the 10-dB gain steps are adjusted by connecting the CAL OUTPUT signal through two step attenuators to the RF INPUT and keying in the REFERENCE LEVEL necessary to activate each of gain steps while compensating for the increased gain with the step attenuators. The 1-dB gain steps are checked in the same fashion as the 10-dB gain steps and then the variable gain is adjusted. The 18.4 MHz oscillator frequency is adjusted to provide adequate adjustment range of front-panel FREQ ZERO control and last, the +10V temperature compensation supply used by the A4A4 Bandwidth Filter and A4A8 Attenuator-Bandwidth Filter is checked and adjusted if necessary.

ADJUSTMENTS

5-24. STEP GAIN AND 18.4 MHz LOCAL OSCILLATOR ADJUSTMENTS (Cont'd)

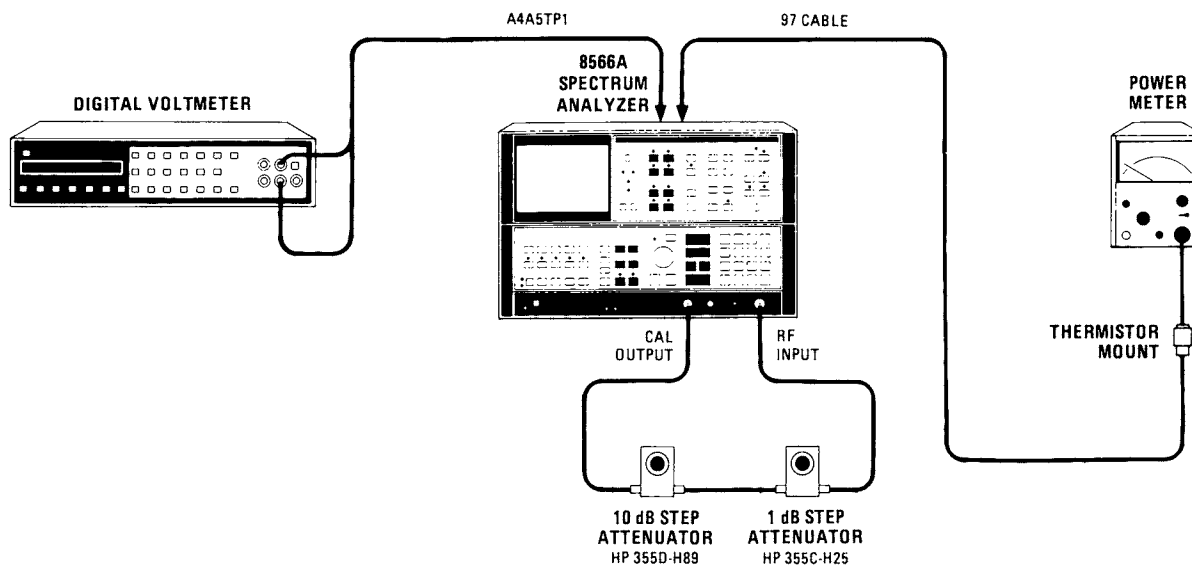








Figure 5-32. Step Gain and 18.4 MHz Local Oscillator Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM)	HP 3455A
Power Meter/Thermistor Mount	HP 432A/478A
10-dB Step Attenuator	HP 355D, Option H89
1-dB Step Attenuator	HP 355C, Option H25

PROCEDURE:

1. Position instrument upright as shown in Figure 5-32 and remove top cover.
2. The validity of the results of this adjustment procedure is based in part on the performance of the Log Amplifiers and the Video Processor. Proper adjustment of the Log Amplifiers and Video Processor is necessary before proceeding with this adjustment procedure.
3. Set instrument LINE switch to ON and press  pushbutton. Connect CAL OUTPUT to RF INPUT.
4. Key in  100 MHz,  -10 dBm,  0 dBm,  1 MHz,  0 Hz.

IF Gain Adjustment

5. Disconnect 97 (white/violet) cable from A4A8J1 and connect cable to power meter/thermistor mount. Refer to Figure 5-33 for location of 97 cable and A4A8J1.

ADJUSTMENTS

5-24. STEP GAIN AND 18.4 MHz LOCAL OSCILLATOR ADJUSTMENTS (Cont'd)

6. Adjust front-panel AMPTD CAL adjustment for a power meter indication of -5 dBm.
7. Disconnect power meter and reconnect 97 cable to A4A8J1.
8. Press LIN pushbutton.
9. Adjust A4A5R33 CAL to align signal trace with top graticule line. Refer to Figure 5-33 for location of adjustment.
10. If A4A5R33 CAL adjustment does not have sufficient range to adjust trace to top graticule line, increase or decrease the value of A4A7R60 as necessary to achieve the proper adjustment range of A4A5 CAL adjustment. Refer to Table 5-3 for range of values for A4A7R60. Refer to A4A7 component location illustration in Section VIII for location of A4A7R60.

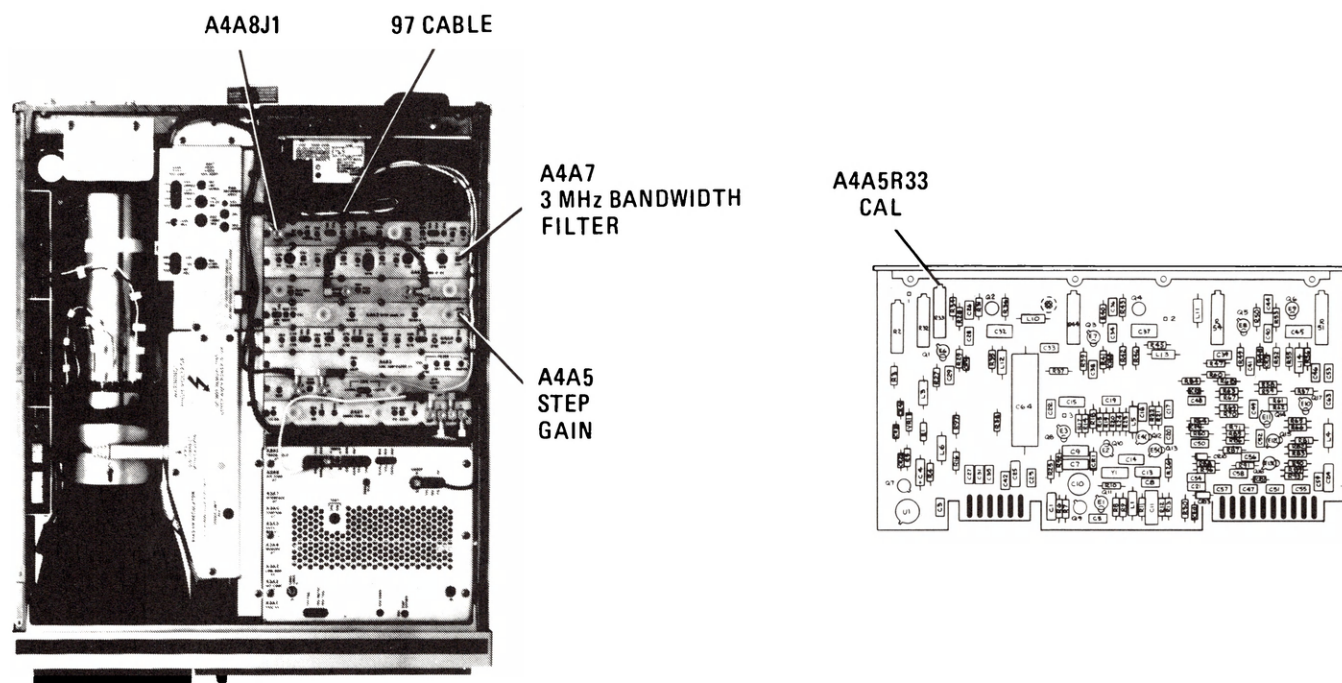


Figure 5-33. Location of IF Gain Adjustment

10-dB Gain Step Adjustment

11. Connect CAL OUTPUT to RF INPUT through 10-dB step attenuator and 1-dB step attenuator.
12. Key in LOG ENTER
dB/DIV 1 dB.
13. Set step attenuators to 5 dB.

ADJUSTMENTS

5-24. STEP GAIN AND 18.4 MHz LOCAL OSCILLATOR ADJUSTMENTS (Cont'd)

14. Key in MARKER Δ . Signal trace should be at center graticule line and MKR Δ level, as indicated by CRT annotation, should be .00 dB.
15. Key in $\boxed{\text{REFERENCE LEVEL}}$ – 20 dBm. Set step attenuators to 15 dB.
16. Adjust A4A5R32 SG10 for MKR Δ level of .00 dB CRT MKR Δ annotation is now in upper right corner of CRT display. Refer to Figure 5-34 for location of adjustment.
17. If A4A5R32 SG10 adjustment does not have sufficient range to perform adjustment in Step 16, increase or decrease the value of A4A7R60 as necessary to achieve the proper adjustment range of A4A5 SG10. Refer to Table 5-3 for range of values for A4A7R60.
18. Key in $\boxed{\text{REFERENCE LEVEL}}$ – 30 dBm. Set step attenuators to 25 dB.
19. Adjust A4A5R44 SG20-1 for MKR Δ level of .00 dB. Refer to Figure 5-34 for location of adjustment.
20. Key in $\boxed{\text{REFERENCE LEVEL}}$ – 50 dBm. Set step attenuators to 45 dB.
21. Adjust A4A5R54 SG20-2 for MKR Δ level of .00 dB. Refer o Figure 5-34 for location of adjustment.

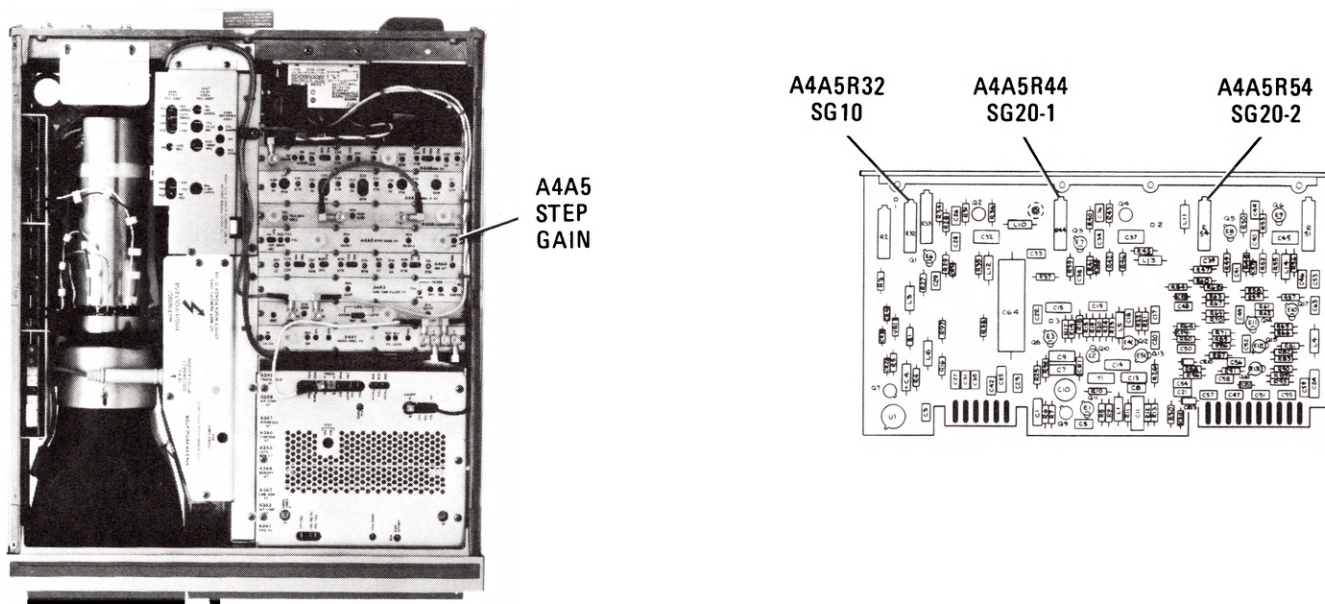


Figure 5-34. Location of 10-dB Gain Step Adjustments

ADJUSTMENTS

5-24. STEP GAIN AND 18.4 MHz LOCAL OSCILLATOR ADJUSTMENTS (Cont'd)

1-dB Gain Step Checks

22. Key in REFERENCE LEVEL - 19.9 dBm. Set step attenuators to 15 dB. Press MARKER Δ pushbutton twice. This establishes a new reference.
23. Key in REFERENCE LEVEL - 17.9 dBm. Set step attenuators to 13 dB.
24. MKR Δ level as indicated by CRT annotation should be $.00 \pm .05$ dB. If not, increase or decrease the value of A4A5R86. Refer to Table 5-3 for range of values.
25. Key in REFERENCE LEVEL - 15.9 dBm. Set step attenuators to 11 dB.
26. MKR Δ level should be $.00 \pm 0.05$ dB. If not, increase or decrease the value of A4A5R70. Refer to Table 5-3 for range of values.
27. Key in REFERENCE LEVEL - 11.9 dBm. Set step attenuators to 7 dB.
28. MKR Δ level should be $.00 \pm 0.05$ dB. If not, increase or decrease the value of A4A5R62. Refer to Table 5-3 for range of values.

.1-dB Gain Step Adjustment

29. Key in LIN SHIFT RES BW AUTO (KSA) and REFERENCE LEVEL - 19.9 dBm. Set step attenuators to 11 dB. Press MARKER Δ pushbutton twice. This establishes a new reference.
30. Key in REFERENCE LEVEL - 19.0 dBm. Set step attenuators to 14 dB.
31. Adjust A4A5R51 VR for MKR Δ level of $-.90$ dB. Refer to Figure 5-35 for location of adjustment.

18.4 MHz Local Oscillator Adjustment

32. Key in RES BW 10 Hz, FREQUENCY SPAN 0 Hz.
33. Remove A4A5 Step Gain assembly and place on extenders.
34. Set front-panel FREQ ZERO control to midrange.
35. Adjust A4A5C10 FREQ ZERO COARSE to peak signal trace on CRT. Refer to Figure 5-35 for location of adjustment.

5-24. STEP GAIN AND 18.4 MHz LOCAL OSCILLATOR ADJUSTMENTS (Cont'd)

36. Install A4A5 Step Gain assembly in instrument without extenders.
37. Key in FREQUENCY
SPAN 500 Hz, RES
BW 100 Hz.
38. Adjust front-panel FREQ ZERO control fully clockwise. Signal should move at least 150 Hz away from center (three divisions).
39. Adjust front-panel FREQ ZERO control fully counterclockwise. Signal should move at least 150 Hz away from center (three divisions).
40. If proper indications are not achieved, increase or decrease value of A4A5C7 and repeat adjustment from Step 32. Refer to Table 5-3 for range of values.

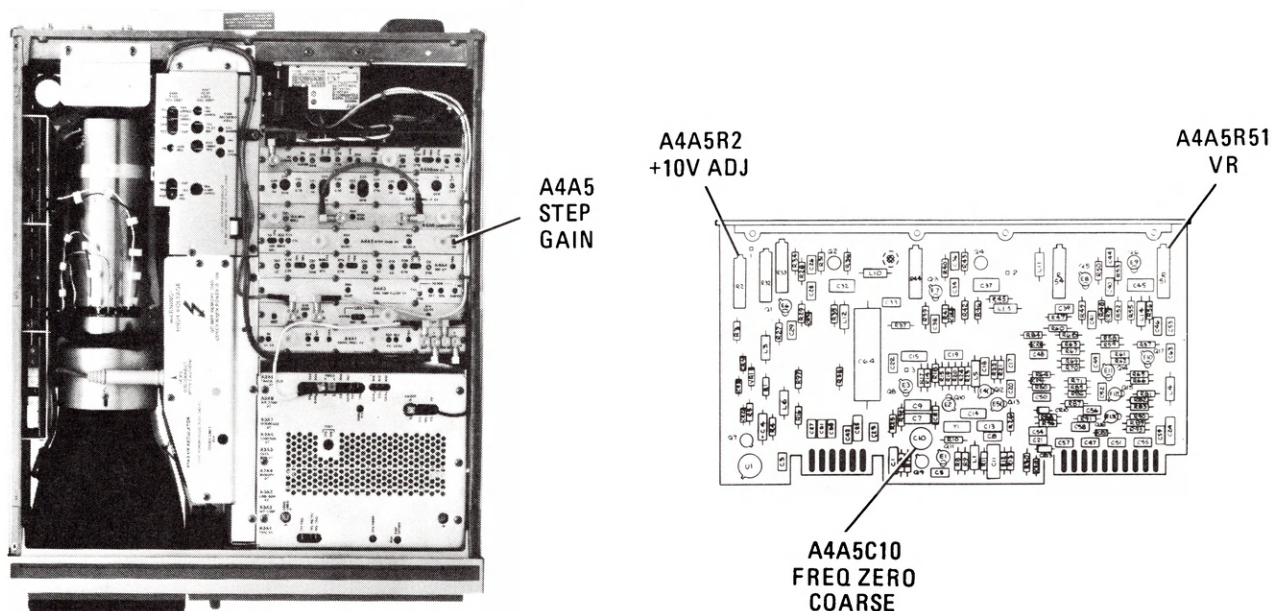


Figure 5-35. Location of .1-dB Gain Step, 18.4 MHz LO, and +10V Adjustments

+ 10V Temperature Compensation Supply Adjustment

41. Connect DVM to A4A5TP1 (+ 10VF).
42. If DVM indication is between + 8.5 Vdc and + 11.0 Vdc, no adjustment is required.
43. If DVM indication is not within tolerance of Step 42, adjust A4A5R2 +10V ADJ for DVM indication of $+9.5 \pm 0.1$ Vdc at normal room temperature of approximately 25°C. Voltage change is approximately 30 mV/°C. Therefore, if room temperature is higher or lower than 25°C, adjustment should be made higher or lower accordingly.

ADJUSTMENTS

5-25. DOWN/UP CONVERTER ADJUSTMENTS

REFERENCE:

A4A6 Down/Up Converter

RELATED PERFORMANCE TEST:

Resolution Bandwidth Switching Uncertainty Test

DESCRIPTION:

First, the CAL OUTPUT signal is connected to the RF INPUT connector of the instrument and controls are set to display the signal in a narrow bandwidth. A marker is placed at the peak of the signal to measure the peak amplitude. The bandwidth is changed to a wide bandwidth and the Down/Up Converter is adjusted to place the peak amplitude of the signal the same as the level of the narrow bandwidth signal.

Next, the input signal is removed and the IF signal is monitored at the output of the Bandwidth Filters using a spectrum analyzer with an active probe. The 18.4 MHz Local Oscillator and all harmonics are then adjusted for minimum amplitude.

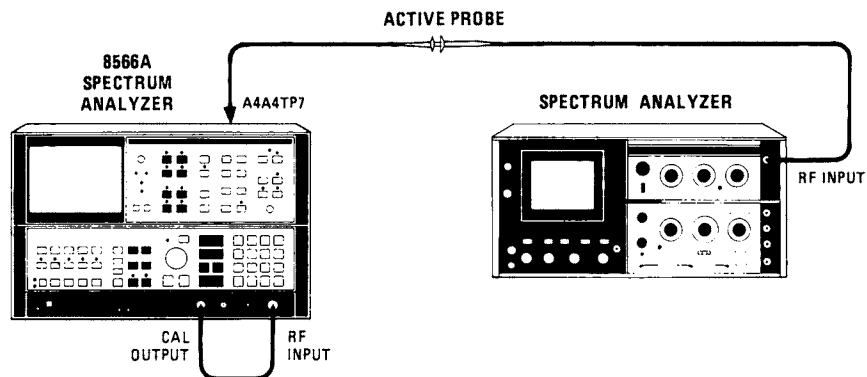


Figure 5-36. Down/Up Converter Adjustments Setup

EQUIPMENT:

Spectrum Analyzer	HP 141T/8552B/8553B
Active Probe	HP 1121A

PROCEDURE:

1. Position instrument upright as shown in Figure 5-36 and remove top cover.
2. Set LINE switch to ON and press 2-22
GHz pushbutton.

ADJUSTMENTS

5-25. DOWN/UP CONVERTER ADJUSTMENTS (Cont'd)

3. Connect CAL OUTPUT to RF INPUT.
4. Key in 100 MHz, 0 Hz, 0 dB, 1 kHz. Press LIN pushbutton then MARKER .
5. Key in 1 MHz.
6. Adjust A4A6A1R29 WIDE GAIN to align markers on CRT display. MKR Δ level should indicate 1.00 X. Refer to Figure 5-37 for location of adjustment.
7. Disconnect CAL OUTPUT from RF INPUT.
8. Key in -70 dBm, 1 kHz, and MARKER .
9. Connect spectrum analyzer through ac probe with 10:1 divider to A4A4TP7.
10. Set spectrum analyzer bandwidth to 100 kHz and scan width/division to 10 MHz.
11. Adjust A4A6A1C31 18.4 MHz NULL to null the 18.4 MHz Local Oscillator signal and all displayed harmonics. Refer to Figure 5-37 for location of adjustment.
12. 18.4 MHz signal and displayed harmonics should be below -10 dBm (-30 dBm on display due to 10:1 divider). If unable to adjust 18.4 MHz NULL for proper indication, increase value of A4A5R10. Refer to Table 5-3 for range of values.

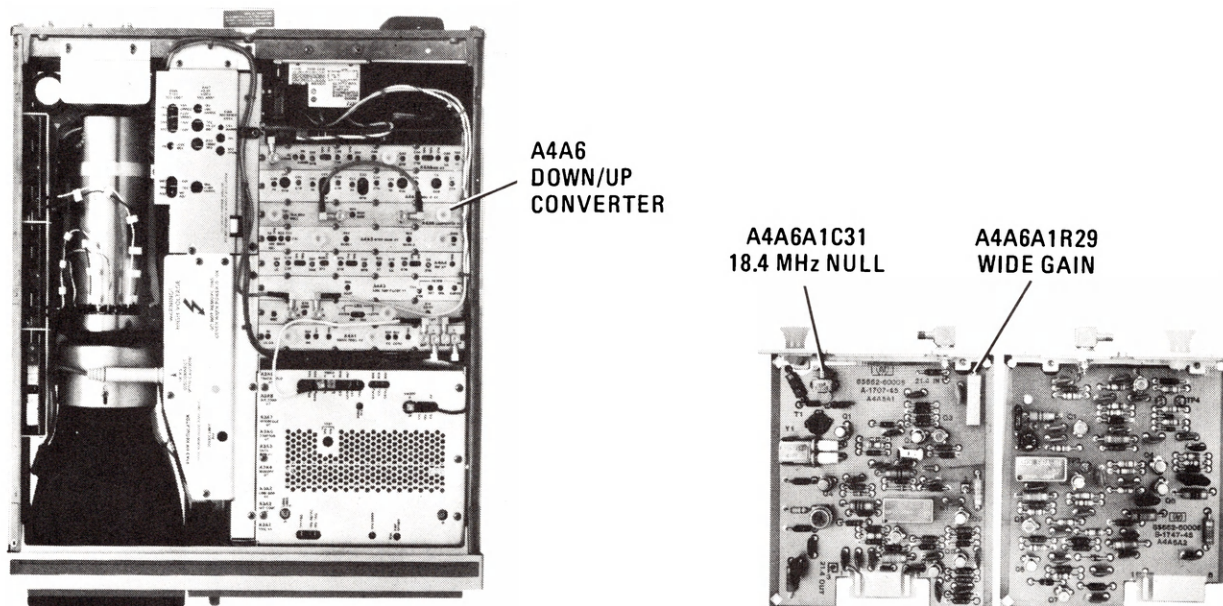


Figure 5-37. Location of Down/Up Converter Adjustments

ADJUSTMENTS

5-26. 10 MHz STANDARD ADJUSTMENT

REFERENCE:

A7A1 Reference Phase Detector

RELATED PERFORMANCE TEST:

Center Frequency Readout Accuracy Test

DESCRIPTION:

The internal 10 MHz time base is adjusted for frequency accuracy. This procedure does not adjust for long-term drift or aging rate. It adjusts only short-term accuracy. To properly adjust the time base, a frequency standard whose accuracy is known to be better than that of the 8566A Time Base is required. Refer to Frequency Reference specifications in Section I, Table 1-1 for complete specifications for the internal time base.

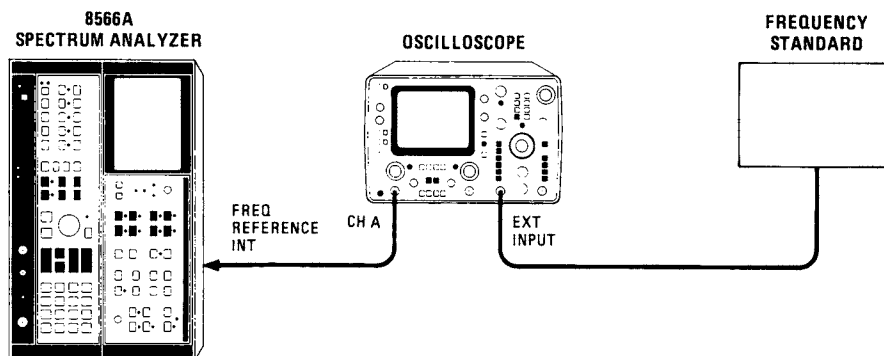


Figure 5-38. 10 MHz Standard Adjustment Setup

EQUIPMENT:

Oscilloscope	HP 1741A
Frequency Standard	any 1,2,5, or 10 MHz
	Frequency standard with accuracy of
	$\pm 1 \times 10^{-10}$ or better such as HP 5061A

PROCEDURE:

1. Position instrument on right side as shown in Figure 5-38 and remove bottom cover.
2. Set LINE switch to ON.

5-26. 10 MHz STANDARD ADJUSTMENT (Cont'd)

NOTE

Primary power must have been applied to the instrument for at least 48 hours before adjusting the internal time base.

3. Connect a frequency standard whose accuracy is known to be better than that of the internal time base, such as an HP 5061A Cesium Beam, to the EXT TRIGGER input of the oscilloscope.
4. Remove cable between FREQ REFERENCE INT and EXT connectors on 8566A rear panel.
5. Connect the INT FREQ REFERENCE output to the Channel A input of the oscilloscope. Set rear-panel FREQ REFERENCE switch to INT.
6. Set oscilloscope controls as follows:

TIME/DIV .....	.1 μ sec
CHAN A VOLTS/DIV .....	.1
MAG x 10 pushbutton	IN
DISPLAY A pushbutton	IN
EXT/INT trigger pushbutton	IN
SWEEP VERNIER control	CAL
TRIGGER HOLDOFF	MIN
AC/DC trigger pushbutton	OUT
POS/NEG trigger pushbutton	OUT
TRIGGER LEVEL control	Centered

7. Adjust TRIGGER LEVEL control as necessary to display sine-wave signal on oscilloscope.
8. Remove screws from A22 10 MHz Standard used to seal adjustments.

NOTE

If THERMAL SHUTDOWN indicator A17DS3 (red LED) is on, 10 MHz standard is disabled.

9. Adjust A22 COARSE frequency adjust for minimum sideways movement of the displayed signal. Adjust A22 FINE frequency adjust for minimum sideways movement of displayed signal. No sideways movement indicates that frequency standard and internal time base frequency are the same. Refer to Figure 5-39 for location of A22 10 MHz Standard.

ADJUSTMENTS

5-26. 10 MHz STANDARD ADJUSTMENT (Cont'd)

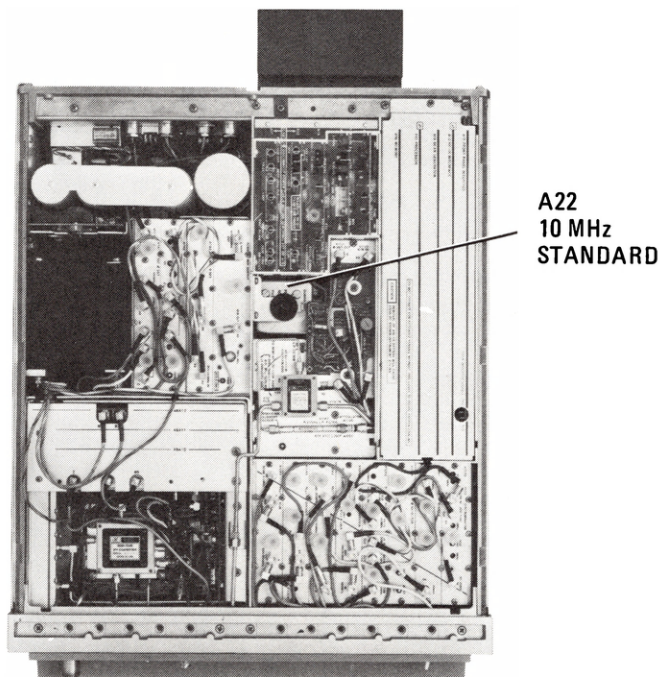


Figure 5-39. Location of 10 MHz Standard Adjustments

10. Note the time in which it takes one cycle of the sine-wave to cross the oscilloscope display. When properly adjusted, it should take greater than 100 seconds for one cycle of the sine-wave to cross the oscilloscope CRT display.
11. Replace screws over A22 adjustments and reconnect cable between FREQ REFERENCE INT and EXT connectors.

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS

REFERENCE:

A16 Scan Generator
A19 Digital-to-Analog Converter (DAC)
A20 Main Coil Driver

RELATED PERFORMANCE TESTS:

Center Frequency Readout Accuracy Test
Frequency Span Accuracy Test
Sweep Time Accuracy Test

ADJUSTMENTS

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

DESCRIPTION:

Sweep Time is adjusted first by viewing the scan ramp on an oscilloscope and adjusting for proper levels. Next, the AUX OUT ramp is adjusted to produce a continuous ramp over entire frequency range (2—22 GHz). Offset adjustments are performed next to set quiescent state of various operational amplifiers. The YTO Main Coil Driver is adjusted next to set the end-points of the oscillator range. Frequency span accuracy for YTO Spans is adjusted next by adjusting Sweep Attenuator gains. Last, band overlap is adjusted at 5.8 GHz and 12.5 GHz.

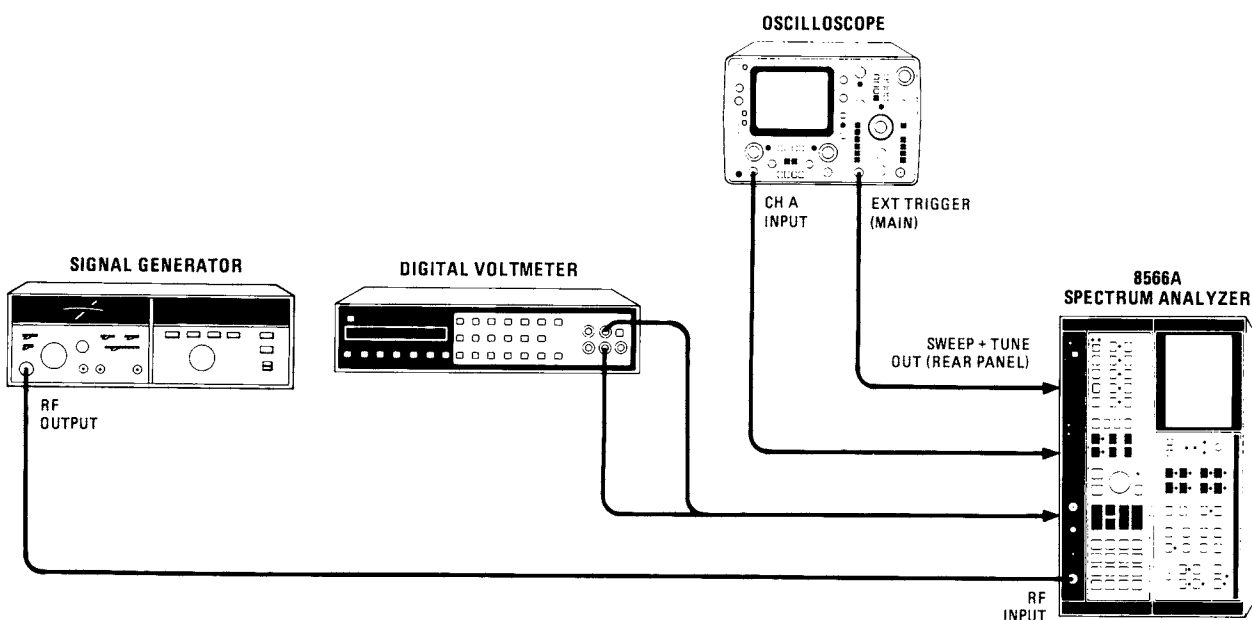


Figure 5-40. Sweep and DAC Adjustments Setup

NOTE

Equipment listed is for three setups: Figure 5-40, 5-45, and 5-46.

EQUIPMENT:

Signal Generator	HP 8672A
Oscilloscope	HP 1741A
Digital Voltmeter (DVM)	HP 3455A
Frequency Counter	HP 5340A
Adapter, BNC Female to SMA Male	HP 1250-1200

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)**PROCEDURE:**

1. Position instrument on right side as shown in Figure 5-40 with bottom cover removed. Remove cover over A12 through A16 PC Boards. Jumper A12TP2 to A12TP3 (Lock Indicator Disable).

2. Set 8566A LINE switch to ON.

Sweep Time Adjustment

3. Press pushbutton. Key in 500 msec.
4. Connect oscilloscope to A16TP3. Connect rear panel SWEEP + TUNE OUT to External Trigger on oscilloscope. Display should be a 0 to +10 Volt ramp.
5. Set Oscilloscope Trigger Level and Persistence as necessary to display full sweep ramp, starting at a convenient point on graticule. Adjust A16R67 SWEEP TIME adjustment for a ramp of 500 msec duration. Refer to Figure 5-41 for typical display.

Aux Out Adjustment

6. Press pushbutton.
7. Connect oscilloscope to A16TP4. Display should be a ramp similar to that shown in Figure 5-42.
8. Adjust A16R68 AUX adjustment to align the dc level of the rest time between each ramp with the upper dc level of each ramp. Refer to Figures 5-42 and 5-43 for typical display and illustration of proper adjustment.

Offset Adjustments

9. Key in SWEEP .
 10. Connect DVM to A16TP3; Ground to A16TP1.
 11. Adjust A16R74 Scan Reset OFFSET for DVM indication as close to 0.0000 Vdc as possible.
 12. Key in 2.4 GHz, , 260 MHz, .
 13. Connect DVM to A16TP5; Ground to A16TP6.
 14. Press pushbutton and alternate between and while monitoring DVM.
 15. Difference between DVM indications for and should be less than 1 mVdc.
 16. If necessary, adjust A16R75 Scan Width DAC OFFSET while alternating between and so that difference in DVM indications is less than 1 mVdc.
-

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

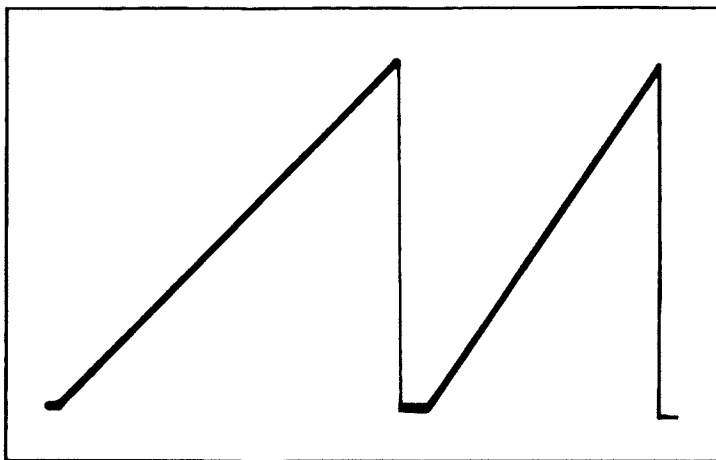


Figure 5-41. 0 to +10 Volt Sweep Ramp at A16TP3

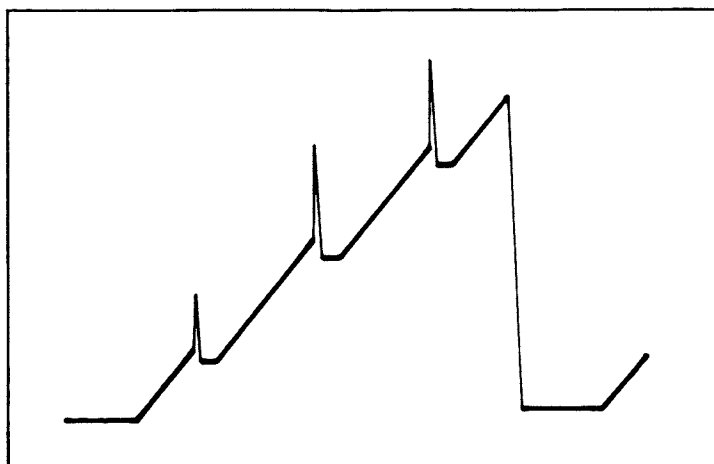


Figure 5-42. Improperly Adjusted DC Levels Between Sweep Ramps

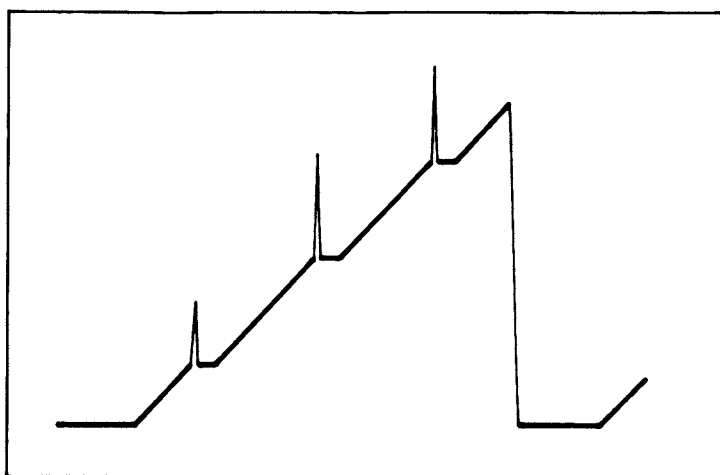


Figure 5-43. Properly Adjusted DC Levels Between Sweep Ramps

ADJUSTMENTS

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

17. Key in 4 GHz, 240 MHz, , 80 MHz, .
18. Connect DVM to A16TP8; Ground to A16TP7.
19. Press pushbutton and alternate between and while monitoring DVM.
20. Difference between DVM indications for and should be less than 1 mVdc.
21. If necessary, adjust A16R76 Integer Number Attenuator OFFSET while alternating between and so that difference in DVM indications is less than 1 mVdc.
22. Key in 2.5 GHz, 4.9 GHz, SWEEP , , 2.51 GHz, .
23. Connect DVM to A19TP2; Ground to A19 GND.
24. Press pushbutton and alternate between and while monitoring DVM.
25. Difference between DVM indications for and should be less than 1 mVdc.
DVM indication will be approximately -8 Vdc.
26. If necessary, adjust A19R19 Summing Amplifier OFFSET while alternating between and so that difference in DVM indications is less than 1 mVdc.
27. Key in 22 GHz, .
28. Press pushbutton and alternate between and while monitoring DVM.
29. Difference between DVM indications for and should be less than 3 mVdc.
30. If necessary, adjust A19R41 25 GHz SPAN OFFSET while alternating between and so that difference in DVM indications is less than 3 mVdc.

YTO DAC Adjustment

31. Press pushbutton.
32. Key in 0 Hz, , 2.3 GHz.
33. Adjust A19R5 DC for DVM indication of -6.900 ± 0.001 Vdc.
34. Key in 6.15 GHz.
35. Adjust A19R2 AV for DVM indication of -18.450 ± 0.001

ADJUSTMENTS

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

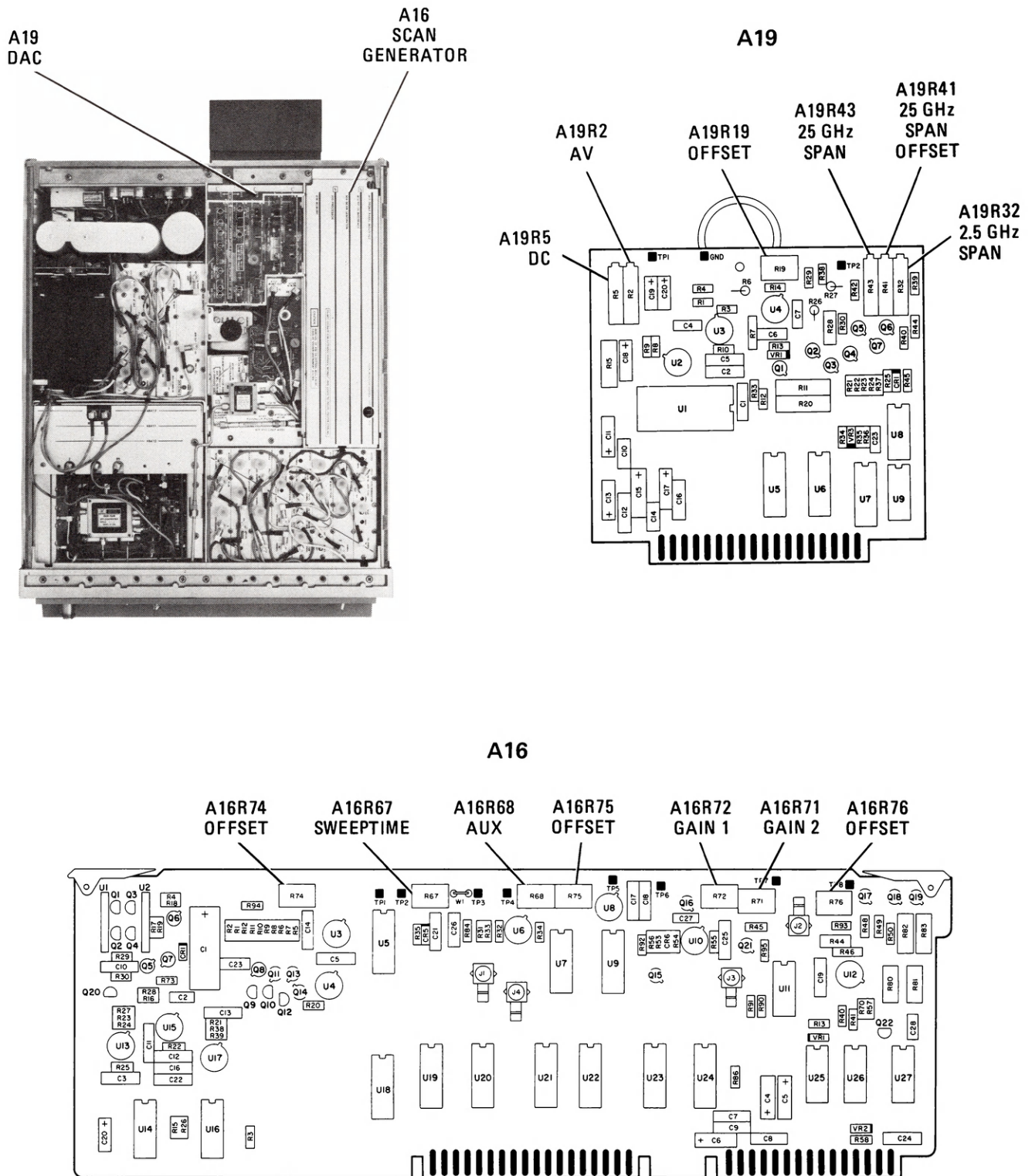


Figure 5-44. Location of Sweep, DAC, and Main Coil Driver Adjustments (1 of 2)

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

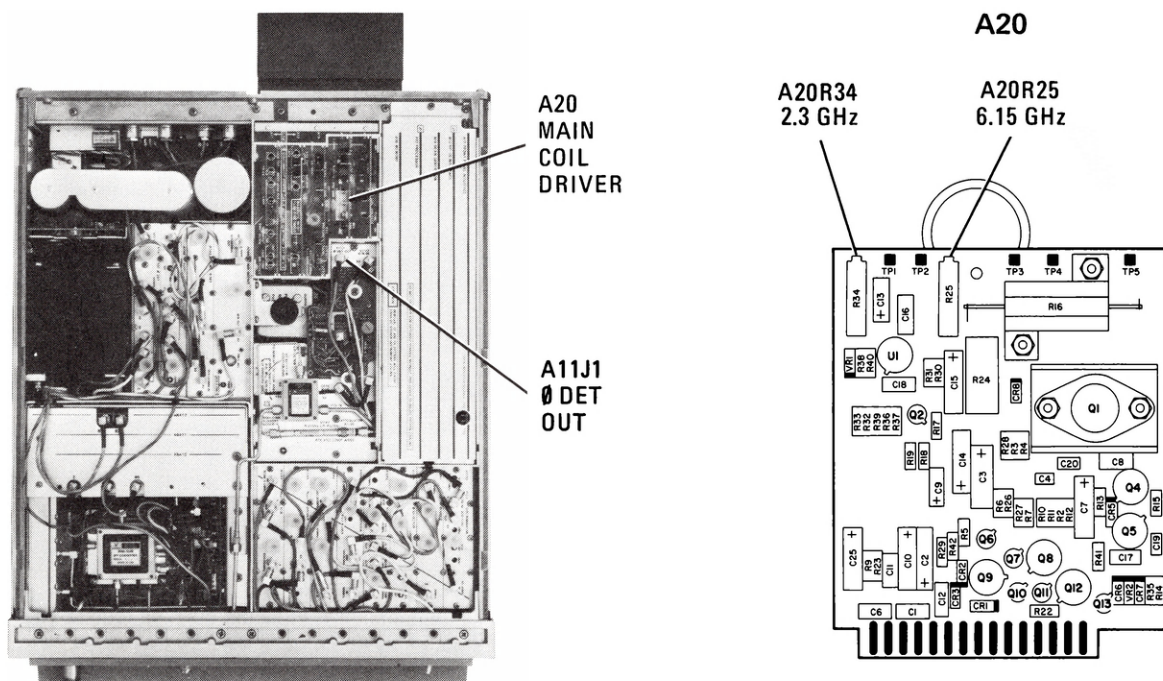


Figure 5-44. Location of Sweep, DAC, and Main Coil Driver Adjustments (2 of 2)

YTO Main Coil Driver Adjustments

36. Press pushbutton. Press . Jumper A20TP5 to A21TP2.
37. Connect frequency counter to front-panel 1st LO OUTPUT as shown in Figure 5-45.
38. Remove 8 (gray) cable at A11J1 Ø DET OUT.
39. Key in 0 Hz 2.3 GHz.
40. Adjust A20R34 2.3 GHz adjustment for a frequency counter indication of 2300.0 ± 0.1 MHz. Refer to Figure 5-44 for location of adjustments. Press .
41. Key in 6150.000 MHz.
42. Adjust A20R25 6.15 GHz adjustment for a frequency counter indication of 6150.0 ± 0.1 MHz. Press .

ADJUSTMENTS

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

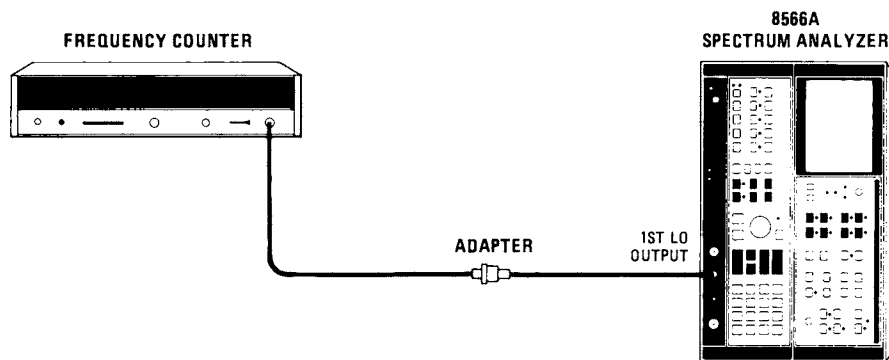


Figure 5-45. YTO Main Coil Driver Adjustment Setup

43. Alternate between **RECALL 1** and **RECALL 2** making adjustments of Steps 40 and 42 until requirements of both steps are met.
44. Remove jumper from between A20TP5 and A21TP2 and reconnect 8 (gray) cable to A11J1.

YTO Main Coil Driver Adjustments (Alternate Procedure)

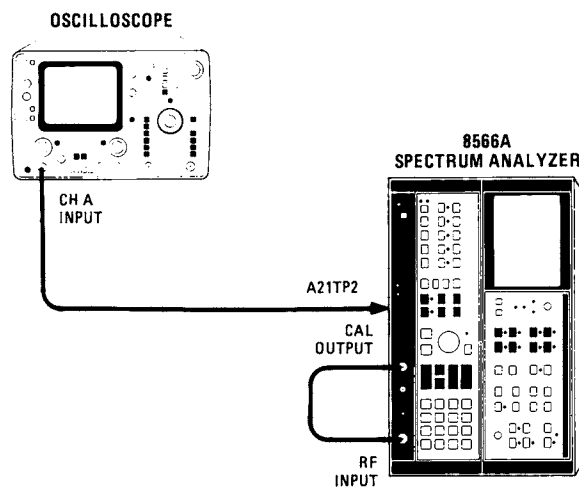


Figure 5-46. YTO Main Coil Driver Adjustments Setup (Alternate Procedure)

ADJUSTMENTS

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

45. Disconnect 8 (gray) cable from A11J1 \emptyset DET OUT. Jumper A12TP2 to A12TP3 (Lock Indicator Disable).
46. Connect CAL OUTPUT to RF INPUT and press **2-22 GHz** .
47. Key in **CENTER FREQUENCY** 0 Hz. (Frequency Span readout should indicate 2 GHz.)
48. Adjust A20R25 6.15 GHz adjustment to obtain two comb teeth (100 MHz harmonics) per division on the 8566A CRT. These comb teeth should be evenly spaced but not necessarily aligned with graticule lines. (Counterclockwise rotation of adjustment increases spacing between comb teeth.)
49. Adjust A20R34 2.3 GHz adjustment to align the LO feedthru signal on the center graticule line. It may be necessary to disconnect RF INPUT to locate the LO feedthru. (Counterclockwise rotation of adjustment moves signal to the right.)
50. Repeat Steps 48 and 49 until comb teeth are spaced two per division and aligned with graticule lines. (Every other comb tooth will align with a graticule line.)
51. Key in **CENTER FREQUENCY** 2 GHz, **FREQUENCY SPAN** 100 MHz. At least one comb tooth should be visible on display.
52. Adjust A20R25 6.15 GHz to place comb tooth nearest the center of the display on the center graticule line.
53. Press **SAVE** **1** .
54. Key in **CENTER FREQUENCY** , **SHIFT** **HOLD** .9 GHz.
55. Press **SAVE** **2** .
56. Adjust A20R34 2.3 GHz to place comb tooth nearest the center of the display on the center graticule line.
57. Repeat adjustments of Steps 52 and 56 by alternating between **RECALL** **1** and **2** until requirements of both steps are met.
58. Key in **CENTER FREQUENCY** 2 GHz, **FREQUENCY SPAN** 10 MHz.
59. Press **SAVE** **3** .
60. Adjust A20R25 6.15 GHz to move nearest comb tooth to center graticule line.
61. Key in **CENTER FREQUENCY** , **SHIFT** **HOLD** .9 GHz.

ADJUSTMENTS

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

62. Press **SAVE** **4** .
63. Adjust A20R34 2.3 GHz to move nearest comb to center graticule line.
64. Repeat adjustments of Steps 60 and 63 by alternating between **RECALL** **3** and **4** .

NOTE

Steps 65 and 66 may be omitted if oscilloscope is not available.

65. Connect oscilloscope to A21TP2. Reconnect 8 (gray) cable to A11J1 \emptyset DET OUT. Remove jumper from A12TP2 to A12TP3 (Lock Indicator Disable).
66. Alternate between **RECALL** **3** and **4** while adjusting A20R25 (6.15 GHz) and A20R34 (2.3 GHz) for dc voltage on oscilloscope $< \pm 0.2$ Vdc.

Sweep Attenuator Gain Adjustments






67. Press **2-22 GHz** pushbutton.
68. Key in **CENTER FREQUENCY** 4 GHz, **FREQUENCY SPAN** 80 MHz.
69. Connect signal generator to RF INPUT and set for output of 4.000000 GHz at -10 dBm.
70. Press **PEAK SEARCH** .
71. Alternately press **PEAK SEARCH** and adjust A16R72 GAIN 1 for marker frequency of 4.000 00 GHz as indicated by CRT annotation on 8566A display.
72. Key in **FREQUENCY SPAN** 240 MHz.
73. Press **PEAK SEARCH** .
74. Alternately press **PEAK SEARCH** and adjust A16R71 GAIN 2 for marker frequency of 4.000 0 GHz as indicated by CRT annotation on 8566A display.

Band Overlap Adjustments

75. Press **2-22 GHz** pushbutton.
76. Change signal generator frequency to 5.820 GHz.
77. Adjust A19R43 25 GHz SPAN Fully counterclockwise.

ADJUSTMENTS

5-27. SWEEP, DAC, AND MAIN COIL DRIVER ADJUSTMENTS (Cont'd)

78. Press  10 GHz.
79. Adjust A19R43 clockwise until the two signals displayed on the 8566A almost coincide (just barely discernible as two signals).
80. Change signal generator frequency to 12.540 GHz.
81. Press  12.5 GHz.
82. 8566A display should be two almost coincident signals as described in Step 79. If not, slightly readjust A19R43 25 GHz SPAN.
83. If adjustment of A19R43 was necessary in the previous step, press  5.8 GHz. Set signal generator to 5.820 GHz and recheck for proper overlap at 5.8 GHz (just barely discernible as two signals).
84. Key in  5.8 GHz,  450 MHz.
85. Change signal generator frequency to 5.800 GHz.
86. Adjust A19R32 2.5 GHz SPAN for best shaped single signal displayed on the 8566A.
87. Remove jumper between A12TP2 and A12TP3 (Lock Indicator Disable). Replace cover over A12 through A16 PC Boards.

5-28. 100 MHz VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO) ADJUSTMENTS

REFERENCE:

A7A2 100 MHz VCXO

RELATED PERFORMANCE TESTS:

Noise Sidebands Test
Residual Responses Test

DESCRIPTION:

The open loop frequency and maximum power output of the 100 MHz VCXO is centered around 100 MHz. The 400 MHz signal is adjusted for maximum 400 MHz output with minimum spurious output. The 400 MHz output is set to -10 dBm by selecting proper resistor values for the attenuator network A7A2R67, R68, and R69.

ADJUSTMENTS

5-28. 100 MHz VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO) ADJUSTMENTS (Cont'd)

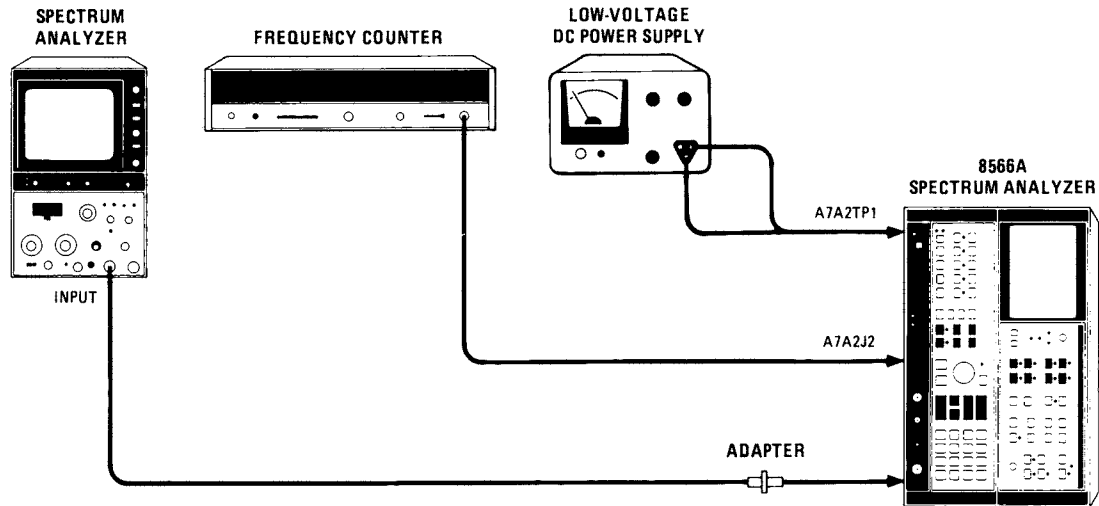



Figure 5-47. 100 MHz VCXO Adjustment Setup

EQUIPMENT:

Frequency Counter	HP 5340A
Spectrum Analyzer	HP 8558B/182T
Low-Voltage DC Power Supply	HP 721A
BNC to SMB Snap-On Test Cable (2 required)	Part of Service Accessories
Adapter, SMB (Snap-On) Male-to-Male	Part of Service Accessories

PROCEDURE:

1. Position instrument on right side as shown in Figure 5-47 with bottom cover removed.
2. Set LINE switch to ON and press  pushbutton.

100 MHz Output Adjustment

3. Jumper – 10 Vdc from A18TP4 to A7A2TP1 TUNE test point. Refer to Figure 5-48 for location of A7A2 and adjustments.
4. Disconnect 83 (gray/orange) cable from A7A2J2 100 MHz OUT. Connect frequency counter to A7A2J2.
5. Adjust A7A2C4 100 MHz through its full range while monitoring frequency counter indication. Adjustment should provide a minimum adjustment range of plus and minus 300 Hz.

ADJUSTMENTS

5-28. 100 MHz VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO) ADJUSTMENTS (Cont'd)

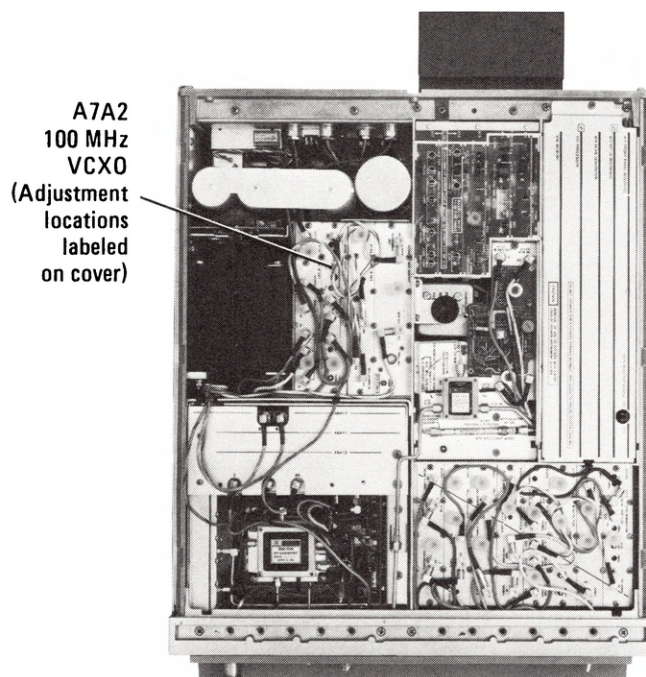


Figure 5-48. Location of 100 MHz VCXO Adjustments

6. If adjustment does not provide sufficient range, select new values for factory selected components A7A2C8 and A7A2L4. A7A2L4 is used to center the adjustment about 100 MHz and A7A2C8 is used to adjust the range of A7A2C4. Refer to Table 5-3 for range of values. Refer to Table 5-4 for HP Part Numbers.
7. Adjust A7A2 100 MHz ADJ A7A2C4 for frequency counter indication of 100.0000 ± 0.0001 MHz.
8. Disconnect 96 (white/blue) cable from A7A3 400 MHz IN. Connect this cable to the 8558B Spectrum Analyzer input using a BNC to SMB Snap-on test cable and SMB male-to-male adapter. Set 8558B controls to view a 400 MHz signal.
9. The 400 MHz output should > -12 dBm.
10. Disconnect jumper from -10 Vdc at A18TP4 and connect to ground. TUNE test point A7A2TP1 is now grounded.
11. Frequency counter indication should be less than 100 MHz. If not, repeat Steps 3 through 10.
12. Disconnect jumper from ground and connect to output of low-voltage DC power supply. Set power supply for an output of -25 Vdc. TUNE test point A7A2TP1 is now at -25 Vdc.

ADJUSTMENTS

5-28. 100 MHz VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO) ADJUSTMENTS (Cont'd)

13. Frequency counter indication should be greater than 100 MHz. If not, repeat Steps 3 through 12. Disconnect power supply from A7A2TP1.

400 MHz Output Adjustment

14. Set 8558B Spectrum Analyzer to 500 MHz center frequency and 100 MHz frequency span per division. Calibrate spectrum analyzer amplitude at these settings. Do not change settings after calibration.
15. Adjust A7A2C3, A7A2C2, and A7A2C1 400 MHz adjustments, in that order, to maximize the 400 MHz signal and minimize all other harmonics of 100 MHz. It may be necessary to perform the adjustment more than once. This should be done in the order stated each time.
16. The amplitude of the 400 MHz signal should be $-9 \text{ dBm} \pm 2 \text{ dB}$. This amplitude is set by selecting attenuator network resistors A7A2R67, A7A2R68, and A7A2R69.

Table 5-5. Selection Chart for Attenuator Resistors

Attenuation (dB)	Resistors (ohms)		
	R67	R68	R69
0	Open	Short	Open
-1	825	6.8	825
-2	422	12.1	422
-3	261	17.8	261
-4	215	23.7	215
-5	178	31.6	178
-6	147	38.3	147
-7	133	46.4	133
-8	121	51.1	121
-9	110	61.9	110

NOTE

HP Part Numbers for resistors may be found in Table 5-4.

ADJUSTMENTS

5-28. 100 MHz VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO) ADJUSTMENTS (Cont'd)

17. If the amplitude of the 400 MHz signal is not within 2 dB of -9 dBm, note the amplitude and change the values of A7A2R67, A7A2R68, and A7A2R69 as necessary to adjust the amplitude to -9 dBm ± 2 dB. Table 5-5 contains a list of attenuations in 1 dB steps and the corresponding values for the attenuator network resistors to adjust the level to -10 dBm. Refer to A7A2 service section in Volume 4 for location of resistors.
 18. Note the level of the 100 MHz harmonics as displayed on the 8558B Spectrum Analyzer.
 19. The 100 MHz harmonics (which are not multiples of 400 MHz) should be greater than 40 dB down from the 400 MHz signal level except at 200 and 800 MHz. The 200 and 800 MHz harmonics should be greater than 25 dB down from the 400 MHz signal level.
 20. Set 8558B Spectrum Analyzer to 400 MHz center frequency and 5 MHz frequency span per division. Set video filter to 12 o'clock position.
 21. Center 400 MHz signal on 8558B display and check for 390 MHz and 410 MHz sidebands (two divisions away on each side of center graticule line). The 390 MHz and 410 MHz sidebands should not be visible on the display. (Greater than 70 dB down from the 400 MHz signal level.)
 22. Disconnect 8558B Spectrum Analyzer and frequency counter from the A7A2 assembly. Reconnect 83 cable (gray/orange) and 96 cable (white/blue).
-

5-29. M/N LOOP ADJUSTMENTS

REFERENCE:

A7A4 M/N Output

DESCRIPTION:

The M/N VCO tuning range is centered and the output level is set and checked to ensure an adequate RF output level across the band of the M/N output.

5-29. M/N LOOP ADJUSTMENTS (Cont'd)

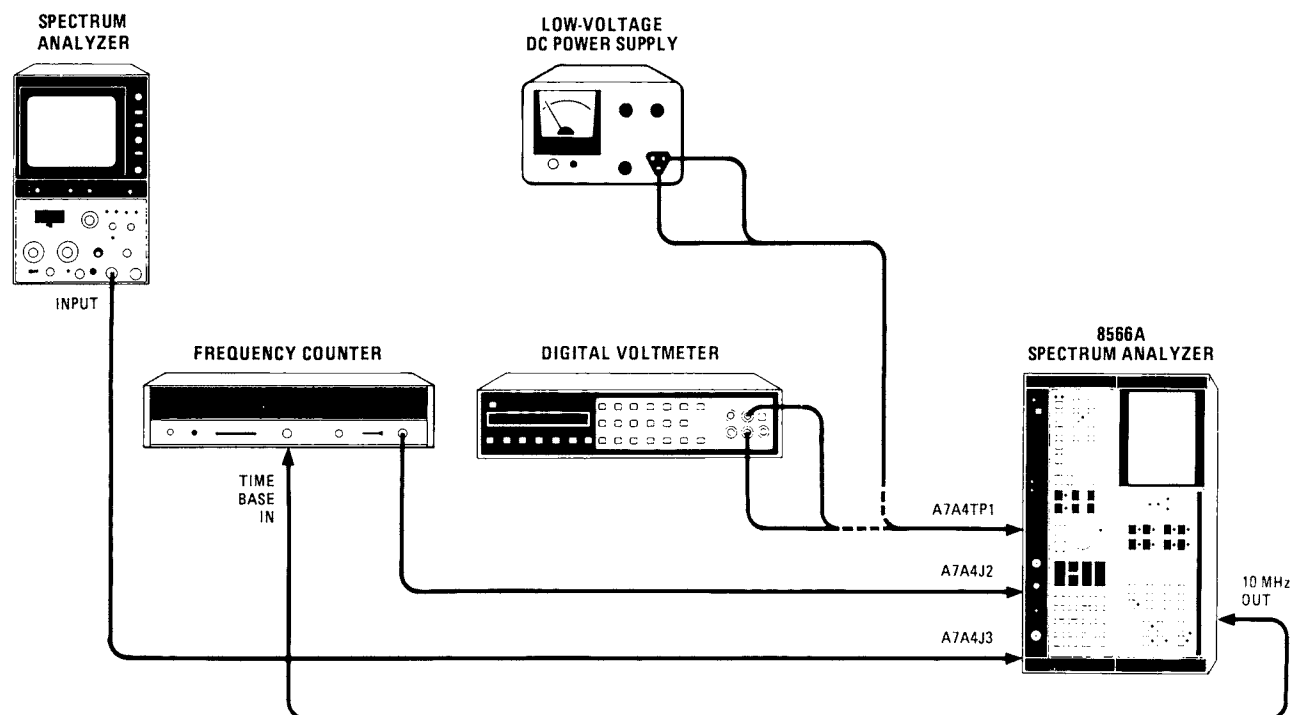


Figure 5-49. M/N Loop Adjustment Setup

EQUIPMENT:

Frequency Counter	HP 5340A
Spectrum Analyzer	HP 8558B/182T
Digital Voltmeter (DVM)	HP 3455A
Low-Voltage DC Power Supply	HP 721A
BNC to SMB Snap-On Test Cable	Part of Service Accessories
Adapter, SMB (Snap-On) Male-to-Male	Part of Service Accessories

PROCEDURE:

1. Position instrument on right side as shown in Figure 5-49 with bottom cover removed.
2. Set LINE switch to ON and press 2-22
GHz pushbutton. Press SHIFT RES
BW. Jumper A12TP2 to A12TP3 (Lock Indicator Disable).
3. Disconnect 93 (white/orange) cable from A7A4J2 M/N OUT and connect frequency counter to this output. Connect rear-panel 10 MHz OUT to frequency counter time base input (be sure to switch frequency counter time base to external).

ADJUSTMENTS

5-29. M/N LOOP ADJUSTMENTS (Cont'd)

4. Key in 6090.000 MHz and 0 Hz on the analyzer.
5. Frequency counter indication should be 197.419 MHz ± 1 count.
6. Connect DVM to A7A4TP1 TUNE test point. Refer to Figure 5-50 for location of A7A4 assembly.

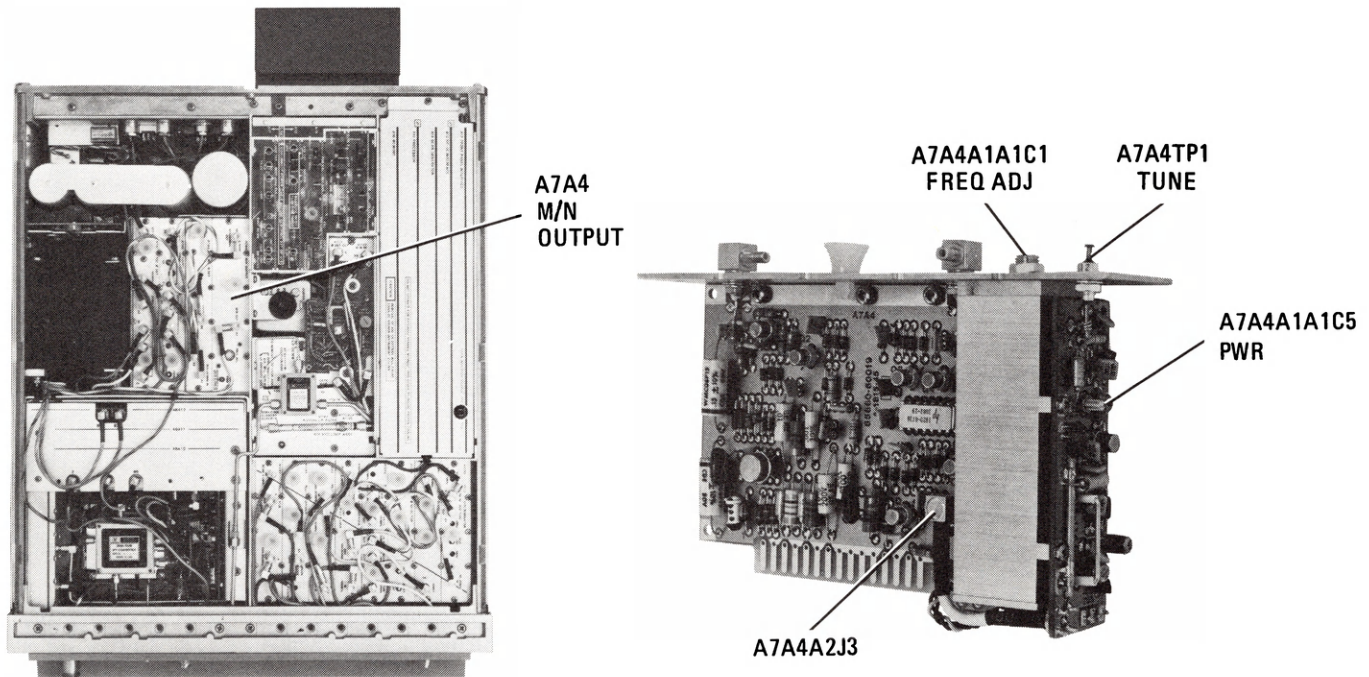



Figure 5-50. Location of M/N Loop Adjustments

7. Adjust A7A4A1A1C1 FREQ ADJ for DVM indication of -35.0 ± 0.5 Vdc.
8. Key in 2100.000 MHz on the analyzer.
9. Frequency counter indication should be 177.500 MHz and the DVM indication should be -2.3 ± 0.5 Vdc.
10. Set 8566A LINE switch to STANDBY.
11. Disconnect frequency counter and DVM from A7A4 assembly. Remove A7A4 assembly from instrument and place on extender board.

ADJUSTMENTS

5-29. M/N LOOP ADJUSTMENTS (Cont'd)

12. Disconnect 9 (white) cable from A7A4A2J3 and connect this cable using SMB male-to-male adapter, to the input of the 8558B Spectrum Analyzer. Set 8566A LINE switch to ON and press  push-button.
13. Set Spectrum analyzer Center Frequency to 375 MHz, Frequency Span to 10 MHz/Division, Reference Level to +5 dBm, and scale to 10 dB/Division. Calibrate amplitude at these settings. Do not change settings after calibration.

CAUTION

Do not apply a positive voltage to A7A4TP1 or damage may occur to the VCO tuning diodes.

14. Connect the low-voltage power supply to the analyzer as follows: Positive lead to ground. (Do this first.) Negative lead to A7A4TP1 TUNE test point. Set the output of the supply for -35.0 ± 0.5 Vdc.
15. Adjust A7A4A1A1C5 PWR for a VCO output level of 0 dBm ± 2 dB as indicated on 8558B Spectrum Analyzer. Refer to Figure 5-50 for location of adjustment.
16. Slowly reduce the dc voltage output of the low-voltage power supply connected to A7A4TP1 TUNE test point while monitoring the VCO output level on the 8558B Spectrum Analyzer and voltage level on DVM.
17. The VCO output level should be greater than -2 dBm between 395 MHz (-35 Vdc) and 355 MHz (-2.3 Vdc).
18. Repeat Steps 2 through 9.
19. Disconnect all test equipment from A7A4 assembly. Set LINE switch to STANDBY and reconnect 9 (white) and 93 (white/orange) cables.
20. Reinstall A7A4 M/N Output Assembly in instrument and remove jumper from A12TP2 to A12TP3 (Lock Indicator Disable).
21. Disconnect cable from 8566A rear-panel 10 MHz OUT and frequency counter rear-panel time base input. Return frequency counter time base switch to internal.

5-30. YTO LOOP ADJUSTMENTS**REFERENCE:**

A11A5 Sampler

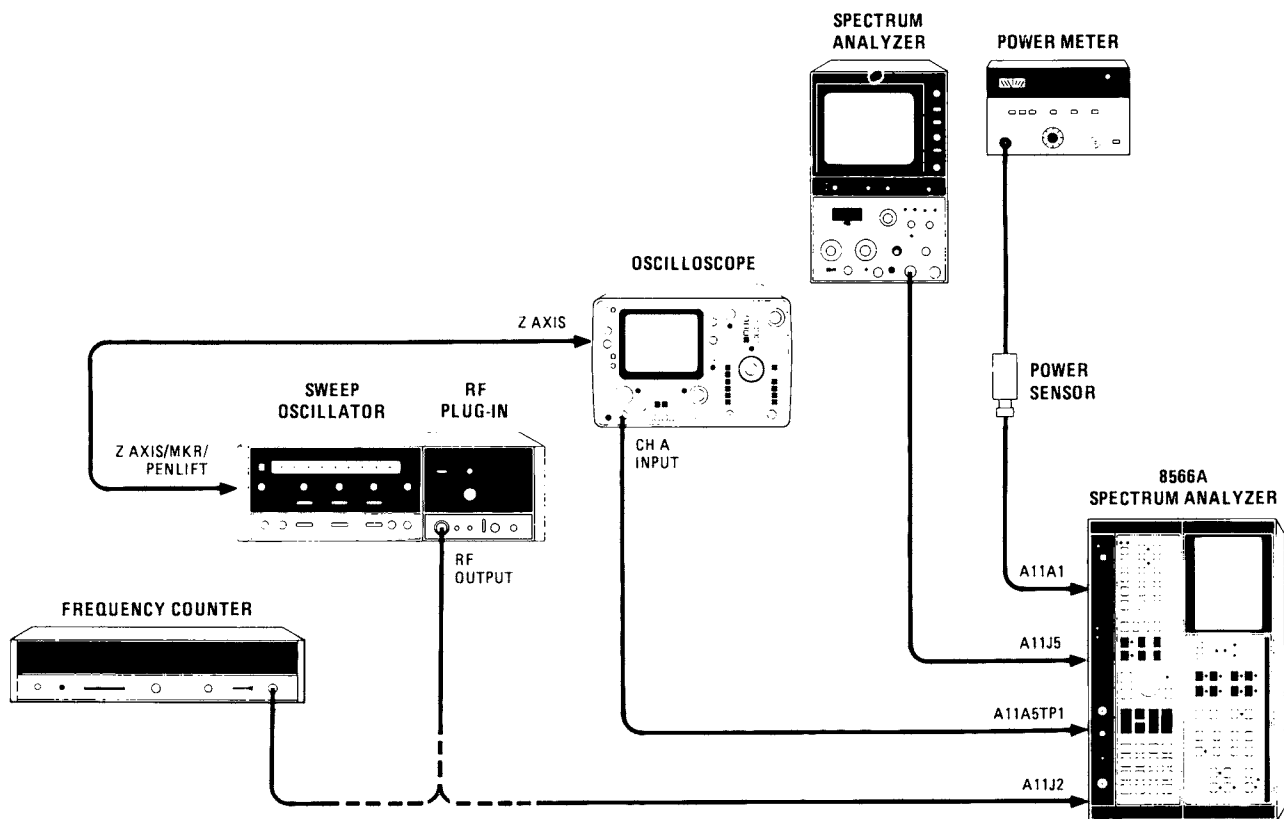
A11A2 YTO Loop Interconnect

RELATED PERFORMANCE TESTS:

Average Noise Level Test

DESCRIPTION:

The sampler is driven by a sweep oscillator and the dc output is monitored with an oscilloscope. The sampler driver circuit is adjusted for maximum amplitude and flatness over the range of M/N Loop. The sampler's IF preamplifier is adjusted for correct output level and the frequency response is checked.

*Figure 5-51. YTO Loop Adjustments Setup*


ADJUSTMENTS

5-30. YTO LOOP ADJUSTMENTS (Cont'd)



EQUIPMENT:

Spectrum Analyzer	HP 8558B/182T
Sweep Oscillator/RF Plug-In	HP 8620C/86222A
Frequency Counter	HP 5340A
Oscilloscope	HP 1741A
Power Meter/Power Sensor	HP 436A/8481A
10:1 Divider Probe	HP 10004D
50-Ohm Termination (SMA Connector)	HP 1810-0118
BNC to SMB Snap-On Test Cable (2 required)	Part of Service Accessories

PROCEDURE:

1. Position instrument on right side as shown in Figure 5-51 with bottom cover removed. Set LINE switch to STANDBY.
2. Install the A11 YTO Loop Assembly in the test position. Refer to Repair Procedures in Volume 4 if necessary.
3. Place a 50-ohm termination on the YTO OUT Port of A11A1 Coupler/Isolator. Jumper A12TP2 to A12TP3 (Lock Indicator Disable).
4. Set instrument LINE switch to ON and press  pushbutton.

Gate Bias Adjustment

5. Disconnect coupled output of A11A1 CIA and connect power meter/thermistor mount to this output.
6. Key in  2 GHz,  0 Hz.
7. Adjust A11A2R2 Gate Bias Adjust for power meter indication of $-2.5 \text{ dBm} \pm 0.5 \text{ dB}$.
8. Disconnect power meter/mount and reconnect cable to coupled output of A11A1 CIA.

Sampler Adjustments

9. Remove cover from A11A5 YTO Loop Sampler Assembly.
10. Connect frequency counter to output of RF Plug-In and adjust sweep oscillator and RF Plug-In controls for an output sweep range of 200 MHz(ΔF) centered at $187.5 \pm 1.0 \text{ MHz}$ at a level of 0 dBm. Remove frequency counter.

ADJUSTMENTS

5-30. YTO LOOP ADJUSTMENTS (Cont'd)

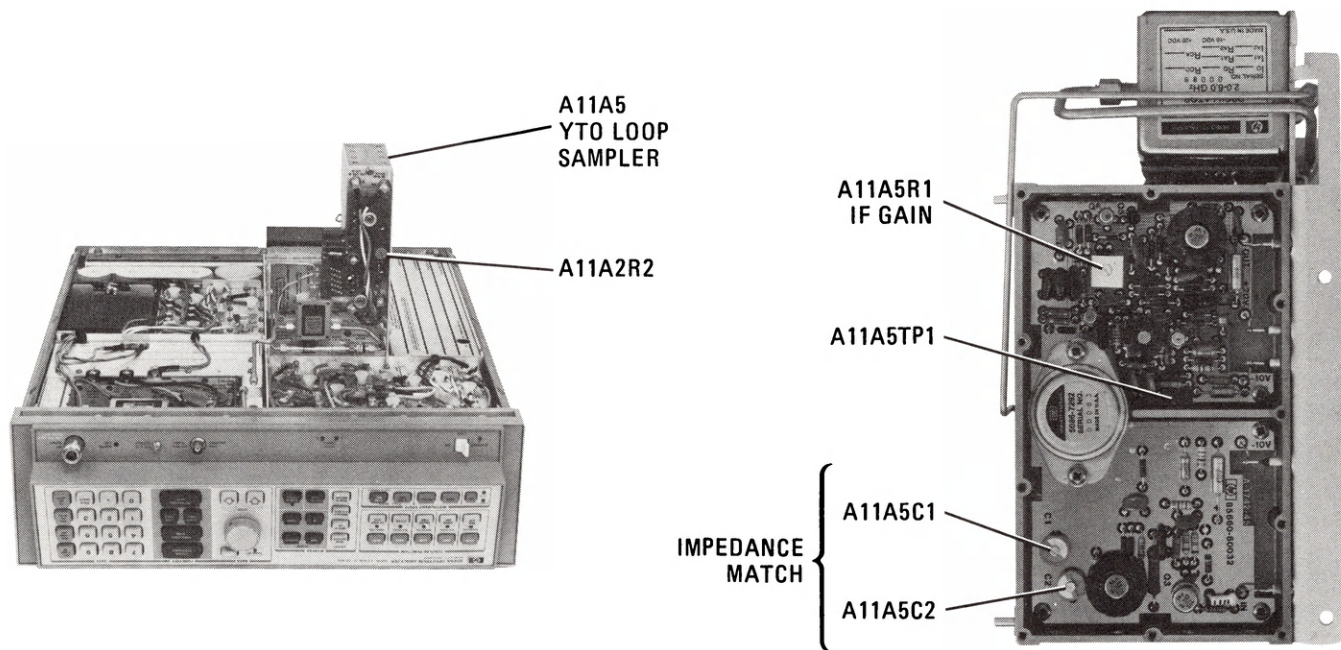


Figure 5-52. Location of YTO Loop Adjustments

11. Disconnect M/N IN 93 (white/orange) cable from A11J2. Connect RF Plug-In output to this input connector.
12. Connect oscilloscope to A11A5TP1.
13. Adjust A11A5 IMPEDANCE MATCH adjustments A11A5C1 and A11A5C2 (using an insulated adjustment tool) for an oscilloscope display similar to that in Figure 5-53. Tune for maximum negative voltage and flatness over the center area of the display. Deviation from reference to maximum negative voltage should be at least 0.4 volts.
14. Jumper A21TP2 to ground. Disconnect oscilloscope from A11A5TP1.
15. Disconnect the \emptyset DET OUT 8 (gray) cable from A11J1.
16. Key in SHIFT RES BW , CENTER FREQUENCY 2100 MHz, FREQUENCY SPAN 0 Hz.
17. Disconnect the IF OUT 0 (black) cable from A11J5 and connect this output connector to the 8558B Spectrum Analyzer input.
18. Connect frequency counter to output of sweep oscillator and set sweep oscillator controls for a 10 MHz sweep signal (ΔF) centered at 177.5 ± 0.1 MHz. Set sweep oscillator for CW output and reconnect it to A11J2 M/N IN.

5-30. YTO LOOP ADJUSTMENTS (Cont'd)

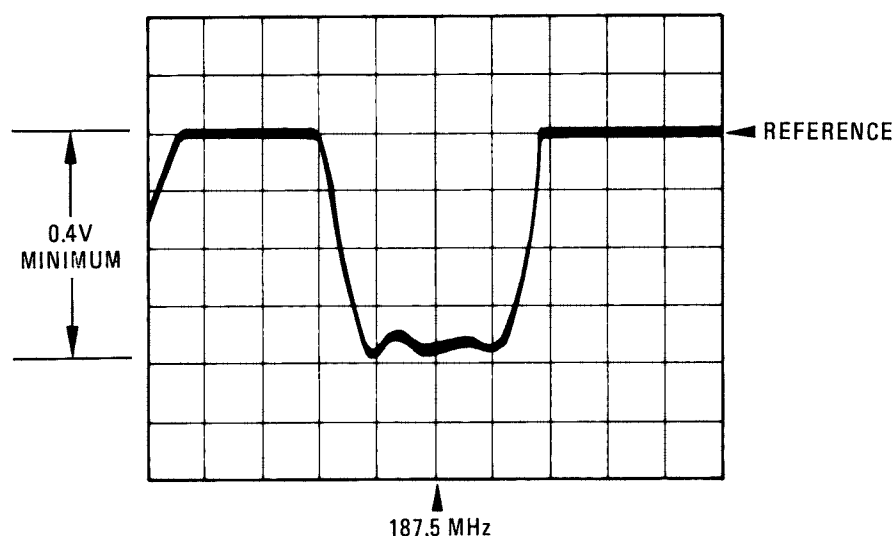


Figure 5-53. Typical Swept Frequency Response at A11A5TP1

19. Set 8558B Spectrum Analyzer to 50 MHz center frequency and 10 MHz frequency span per division. Set video filter to OFF.
20. The IF OUT fundamental, second and third harmonics should be visible at 30, 60, and 90 MHz on the spectrum analyzer display. It may be necessary to tune the spectrum analyzer frequency slightly to align these three signals to 30, 60, and 90 MHz on the spectrum analyzer.
21. Adjust A11A5 IF GAIN A11A5R1 for a 30 MHz signal (fundamental) level of -3 dBm.
22. Set the sweep oscillator RF Plug-In for ΔF output, manual sweep mode.
23. Slowly tune the sweep oscillator using manual sweep control while monitoring the display on the 8558B Spectrum Analyzer.
24. The displayed fundamental signal level (30 MHz) should be as follows:
 - From 5 MHz to 20 MHz; greater than -3 dBm
 - From 20 MHz to 30 MHz; between $+2$ and $+6$ dBm
 - From 30 MHz to 60 MHz; greater than -6 dBm
 - From 60 MHz to 70 MHz; greater than -10 dBm
25. Set LINE switch to STANDBY. Disconnect all equipment, reconnect all cables, remove termination, replace cover on A11A5, and reinstall A11 assembly in instrument. Remove jumper between A21TP2 and ground and between A12TP2 and A12TP3 (Lock Indicator Disable).

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS

REFERENCE:

A10 20/30 Synthesizer
A10A1 PLL1 VCO
A10A3 PLL1 IF
A10A4 PLL3 Up Converter
A10A5 PLL2 VCO
A10A8 PLL2 Discriminator

DESCRIPTION:

Phase Lock Loop 1 40 kHz LPF is properly adjusted using a function generator and spectrum analyzer with active probe. The response of PLL1 is adjusted for maximum rejection of signals between 160 and 166 MHz using a signal generator and spectrum analyzer.

Phase Lock Loop 2 is adjusted by selecting a very narrow span width and adjusting A10A5 and A10A8 for proper voltages at designated test points. If PLL2 will not phase lock (PL2 UNLOCK indicated), the A10A6 PLL2 Phase Detector must be disabled and a slightly different procedure used to initially set the A10A5 and A10A8 adjustments.

Phase Lock Loop 3 is adjusted for maximum multiplier output level at 160 MHz. The VCO is adjusted by setting up proper voltage levels at A10A4TP3.

EQUIPMENT:

Spectrum Analyzer	HP 8557A/182T
Active Probe	HP 1121A
Signal Generator	HP 8640B
Low-Voltage DC Power Supply	HP 721A
Digital Voltmeter (DVM)	HP 3455A
Function Generator	HP 3312A
BNC to SMB Snap-On Test Cable	Part of Service Accessories
Adapter, SMB Male-to-Male.	Part of Service Accessories

PROCEDURE:

A. Phase Lock Loop 1

1. Set LINE switch to STANDBY. Remove A10A1 PLL1 VCO from instrument.

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

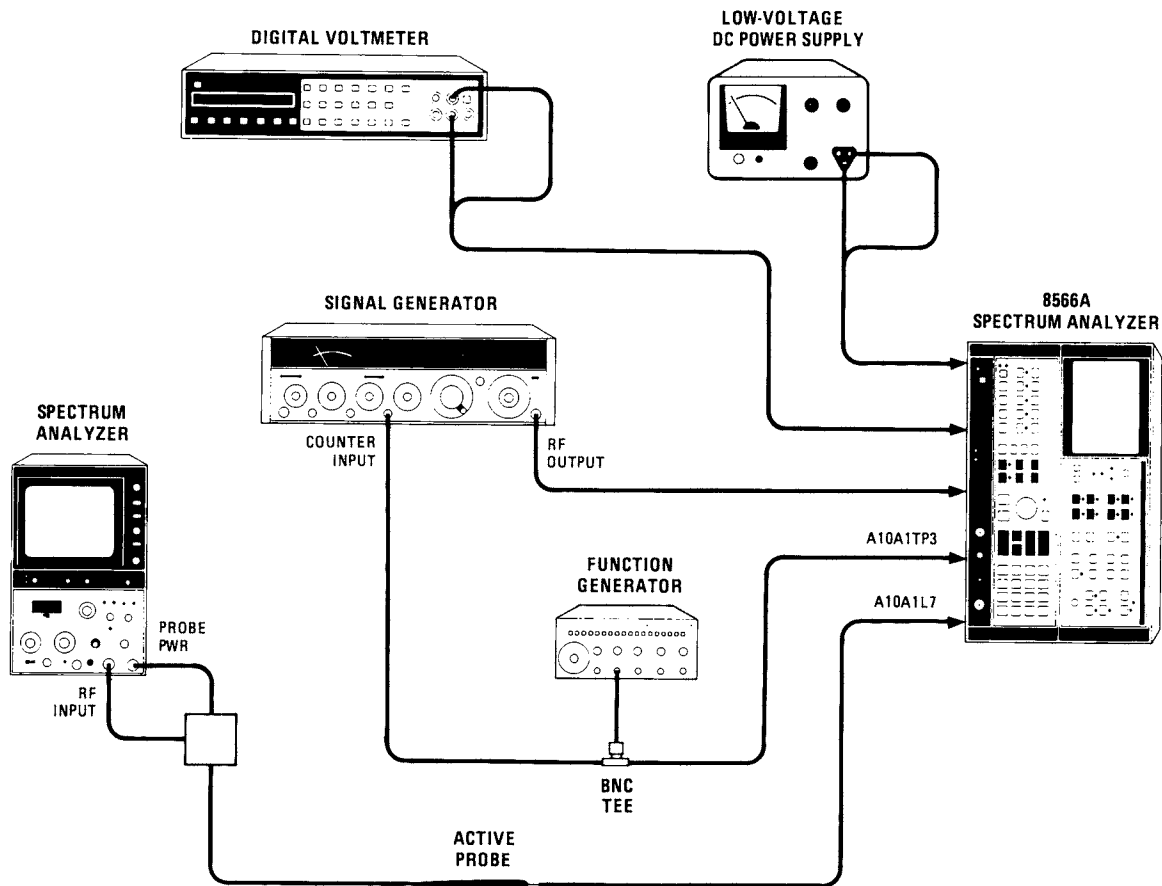


Figure 5-54. 20/30 Loop Phase Lock Adjustments Setup

2. Connect function generator 50 Ohm Output to A10A1TP3 and connect frequency counter (8640B) as shown in Figure 5-54.
3. Connect function generator and set controls for an output of 20.0 ± 0.5 kHz.
4. Set 8557A Spectrum Analyzer controls as follows:

Center Frequency (TUNING)	LO Feedthrough at left edge
Frequency Span	10 kHz
Resolution Bandwidth	3 kHz
5. Connect active probe to 8557A Spectrum Analyzer input and place probe on A10A1L7 terminal closest to A10A1C22.

ADJUSTMENTS

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

6. Set function generator output level to place 20 kHz signal level at 0 dBm on 8557A Spectrum Analyzer.
7. Set function generator to 50.000 ± 0.200 kHz.
8. Adjust A10A1L7 and A10A1L8 50 kHz NULL adjustments to null the 50 kHz signal displayed on the 8557A Spectrum Analyzer. Refer to Figure 5-55 for location of adjustments.

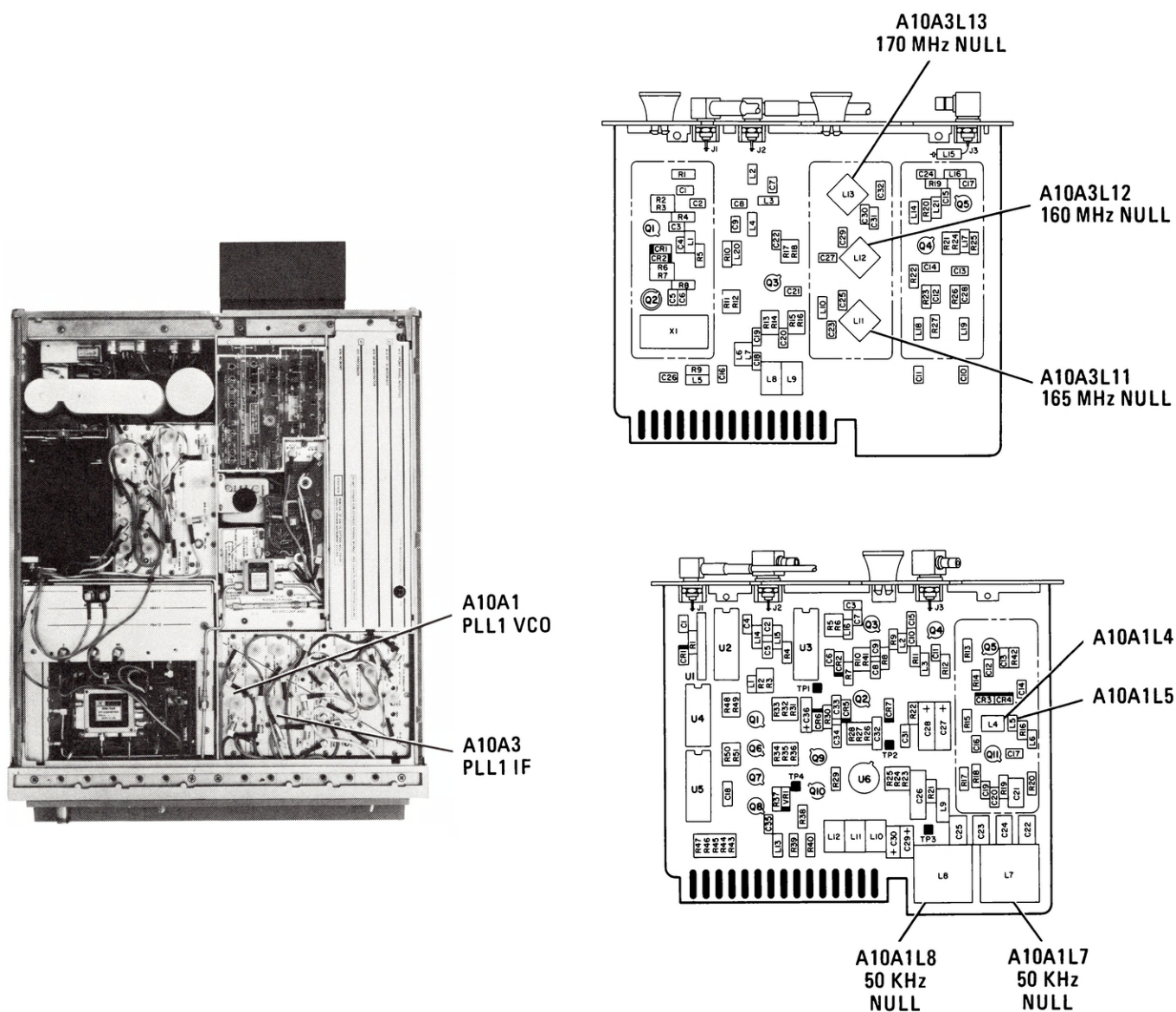


Figure 5-55. Location of PLL1 Adjustments

ADJUSTMENTS

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

9. Note the level of the 50 kHz signal. This level should be at least 65 dB down from the level of the 20 kHz response. Disconnect test equipment from A10A1 assembly.
 10. Place A10A1 PLL1 VCO on extender board and install in instrument. Connect all cables. Turn instrument LINE switch ON. Press 2-22
GHz .
 11. Key in FREQUENCY
SPAN 0 Hz.
 12. Disconnect active probe from spectrum analyzer and connect spectrum analyzer input to A10A1J3 200-300 MHz OUT using a BNC to SMB snap-on test cable.
 13. Connect a low-voltage dc power supply positive lead to A10A1TP3 and negative lead to any convenient chassis ground. Set power supply for $+16.0 \pm 0.1$ Vdc.
 14. Oscillator frequency should be 310 ± 10 MHz as indicated on the 8557A Spectrum Analyzer. If not, remove metal shield from A10A1 assembly and increase or decrease spacing between turns of A10A1L4 and A10A1L5 to properly tune the oscillator.
 15. Change power supply voltage to $+4.0 \pm 0.1$ Vdc.
 16. Oscillator frequency should drop below 200 MHz with an amplitude greater than -7 dBm.
 17. Repeat Steps 13 through 16 if necessary to meet requirements.
 18. Set LINE switch to STANDBY. Replace metal shield on A10A1 if removed, reinstall A10A1 PLL1 VCO assembly in instrument and reconnect all cables.
 19. Remove A10A3 PLL1 IF from instrument and install on extender board.
 20. Set LINE switch to ON and press 2-22
GHz . Key in CENTER
FREQUENCY 42.57 MHz, FREQUENCY
SPAN 0 Hz.
 21. Connect 8557A Spectrum Analyzer to A10A3J3 IF OUT.
 22. Disconnect 4 (yellow) cable from A10A1J3 200-300 MHz OUT and connect it to signal generator using BNC to SMB snap-on test cable and adapter.
 23. Adjust A10A3L11 165 MHz NULL, A10A3L12 160 MHz NULL, and A10A3L13 170 MHz NULL fully clockwise.
 24. Set signal generator for an output of 330.3 ± 0.2 MHz at 0 dBm.
 25. Adjust A10A3L13 170 MHz NULL to null the 170 MHz signal on the 8557A Spectrum Analyzer.
-





5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

26. Change signal generator frequency to 325.3 ± 0.2 MHz.
27. Adjust A10A3L11 165 MHz NULL to null the 165 MHz signal on the 8557A Spectrum Analyzer.
28. Change signal generator frequency to 320.3 ± 0.2 MHz.
29. Adjust A10A3L12 160 MHz NULL to null the 160 MHz signal on the 8557A Spectrum Analyzer
30. Tune the signal generator to 300.3 ± 0.2 MHz. Note the amplitude of the 140 MHz response on the 8557A Spectrum Analyzer.
31. Set 8557A center frequency to 160 MHz and frequency span per division to 2 MHz. Tune the signal generator from 320.3 to 326.3 MHz slowly while monitoring the display on the 8557A Spectrum Analyzer.
32. The amplitude of the signal response between 160 and 166 MHz (signal generator frequency 320.3 to 326.3 MHz) should be at least 60 dB below the response at 140 MHz (signal generator frequency of 300.3 MHz) noted in Step 30.
33. Set LINE switch to STANDBY. Reinstall A10A3 PLL1 IF assembly in instrument and reconnect all cables.

B. Phase Lock Loop 2

NOTE

If PLL2 is phase locked, proceed to step B12. If PLL2 will not phase lock (PL2 UNLOCK indicated on CRT), start with step B1.

1. Set LINE switch to STANDBY. Remove A10A6 PLL2 \emptyset Detector from its connector on the mother-board. (It is not necessary to completely remove the A10A6 assembly from the instrument.)
2. Set LINE switch to ON and press  .
3. Remove 7 (violet) cable from A10A5J4 SCAN $\leq .1$ MHz and connect frequency counter to A10A5J4 using BNC to SMB snap-on test cable.
4. Key in  10 MHz,  8.600 MHz, SWEEP  .
5. Connect DVM to A10A8TP5 VCO TUNE.
6. Adjust A10A5R2 150 MHz adjustment for a DVM indication of $+3.0 \pm 0.5$ V. Refer to Figure 5-56 for location of adjustments.

ADJUSTMENTS

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

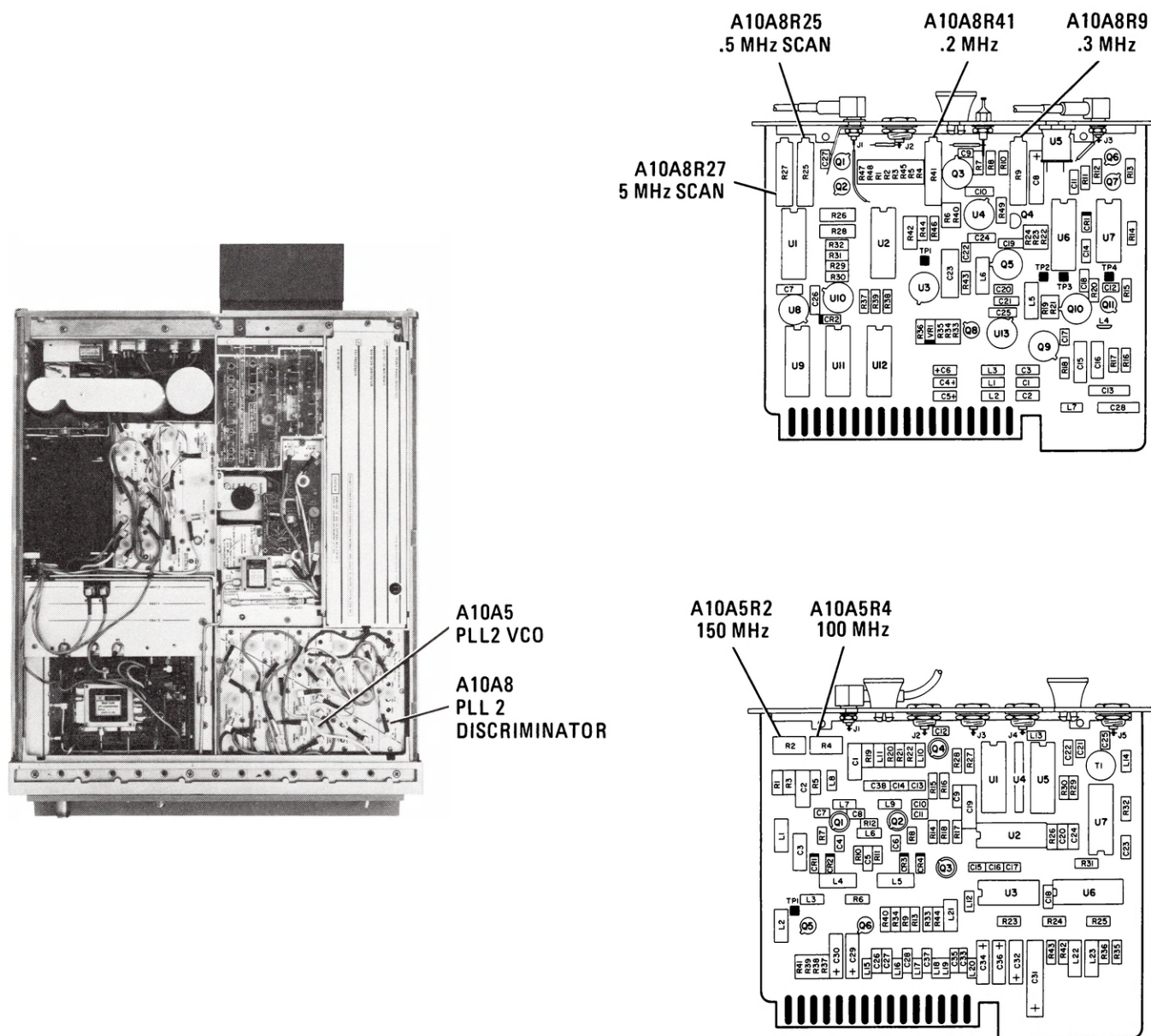













Figure 5-56. Location of PLL2 Adjustments

7. Adjust A10A8R9 .3 MHz adjustment for a frequency counter indication of 0.300 ± 0.001 MHz.
8. Key in START
FREQ 8.599 MHz (CRT annotation will round off to 8.60 MHz, but 8566A is actually set to a start frequency of 8.599 MHz).
9. Adjust A10A5R4 100 MHz adjustment for a DVM indication of $+15.0 \pm 0.5$ V.

ADJUSTMENTS

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

10. Adjust A10A8R41 .2 MHz adjustment for a frequency counter indication of 0.200 ± 0.001 MHz.
11. Reinstall A10A6 PLL2 \emptyset Detector and reconnect 7 (violet) cable to A10A5J4 SCAN $\leq .1$ MHz.
12. Set LINE switch to ON. Press  .
13. Key in  10 MHz,  8.600 MHz, SWEEP  .
14. Connect DVM to A10A8TP5 VCO TUNE.
15. Adjust A10A5R2 150 MHz adjustment for a DVM reading of $+3.00 \pm 0.05$ V.
16. Connect DVM to A10A6TP7 \emptyset DET OUT.
17. Adjust A10A8R9 .3 MHz adjustment for a DVM indication of $+3.50 \pm 0.05$ V.
18. Key in  8.599 MHz (CRT annotation will round off to 8.60 MHz, but 8566A is actually set to a start frequency of 8.599 MHz).
19. Connect DVM to A10A8TP5 VCO TUNE.
20. Adjust A10A5R4 100 MHz adjustment for a DVM indication of $+15.00 \pm 0.05$ V.
21. Connect DVM to A10A6TP7 \emptyset DET OUT.
22. Adjust A10A8R41 .2 MHz adjustment for a DVM indication of 3.50 ± 0.05 V.
23. Repeat Steps B13 through B22 until no further adjustment is required.
24. Connect front-panel CAL OUTPUT to RF INPUT.
25. Key in  100.5 MHz,  95.5 MHz,  100 msec.
26. Adjust A10A8R27 5 MHz SCAN to center 100 MHz CAL OUTPUT signal on ninth graticule line.
27. Key in  100.05 MHz,  99.55 MHz,  500 msec.
28. Adjust A10A8R25 .5 MHz SCAN to center 100 MHz CAL OUTPUT signal on ninth graticule line.

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

C. Phase Lock Loop 3

1. Set LINE switch to STANDBY. Remove A10A4 PLL3 Up Converter and install on extender board.
2. Set LINE switch to ON and press 2-22
GHz. Key in FREQUENCY
SPAN 0 Hz.
3. Connect 8557A Spectrum Analyzer to Test Connector A10A4J4. Tune spectrum analyzer center frequency to 160 MHz. Set reference level to place 160 MHz signal at top graticule line and set scale to 1 dB per division.

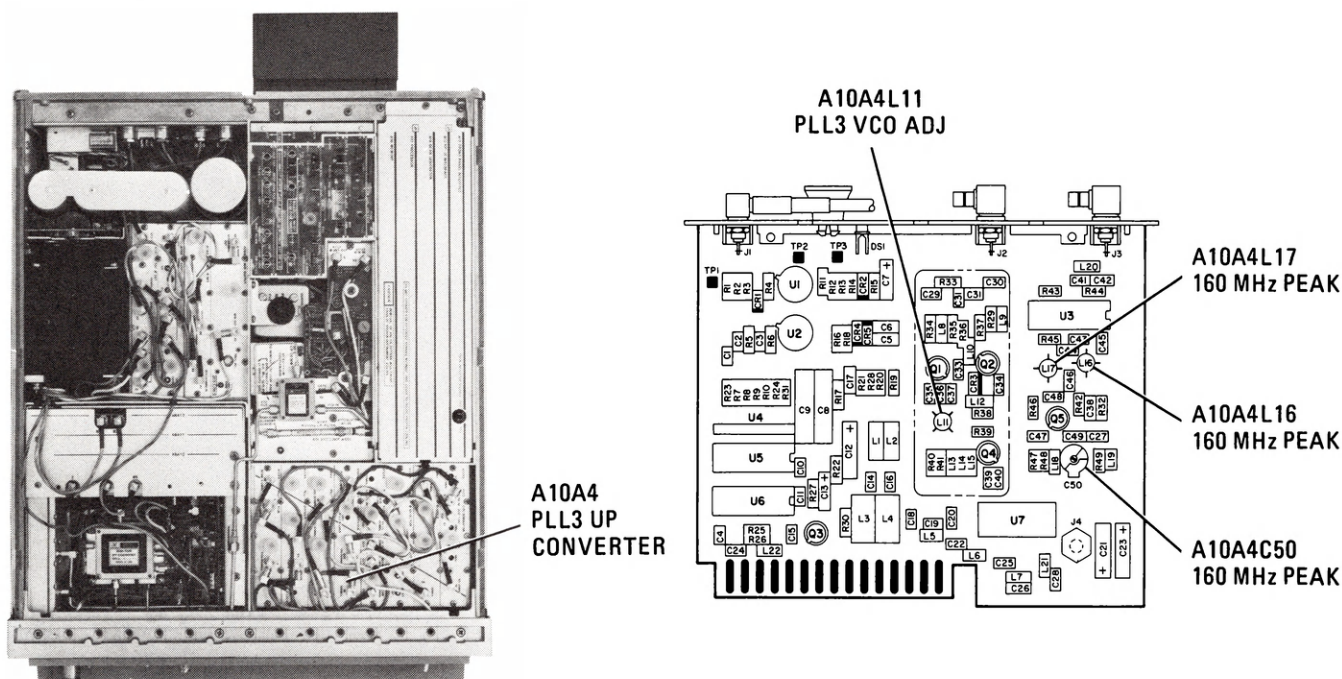


Figure 5-57. Location of PLL3 Adjustments

4. Adjust A10A4L16, A10A4L17, and A10A4C50 160 MHz PEAK for maximum signal level at 160 MHz. Iteration of L16 and L17 adjustment may be necessary. Refer to Figure 5-57 for location of adjustments.
5. Key in CENTER
FREQUENCY 42.450 MHz, FREQUENCY
SPAN 100 kHz, SWEEP SINGLE.
6. Tune 8557A Spectrum Analyzer to center frequency of 6 MHz. Set scale to 10 dB per division.
7. The 6 MHz signal displayed should be at least -42 dBm. If not, repeat Steps 1 through 6.
8. Disconnect 8557A. Connect DVM to A10A4TP3.

ADJUSTMENTS

5-31. 20/30 LOOP PHASE LOCK ADJUSTMENTS (Cont'd)

9. Adjust A10A4L11 PLL3 VCO ADJ for DVM indication of -7.0 ± 0.1 Vdc. The voltage may not change with initial adjustment but will change once the phase lock loop locks.
10. Change **CENTER FREQUENCY** to 42.57 MHz and **FREQUENCY SPAN** to 0 Hz. Press **SINGLE** pushbutton to initiate a sweep.
11. DVM indication should be -3.0 ± 0.5 Vdc.
12. Set LINE switch to STANDBY. Disconnect test equipment and reinstall A10A4 PLL3 Up Converter in instrument.

5-32. RF MODULE PHASE LOCK ADJUSTMENTS

REFERENCE:

A6A9 Phase Lock

DESCRIPTION:

The A6A9 Phase Lock assembly sampler is adjusted and checked for proper operation. The 300 MHz signal is peaked using an 8558B Spectrum Analyzer to observe the signal.

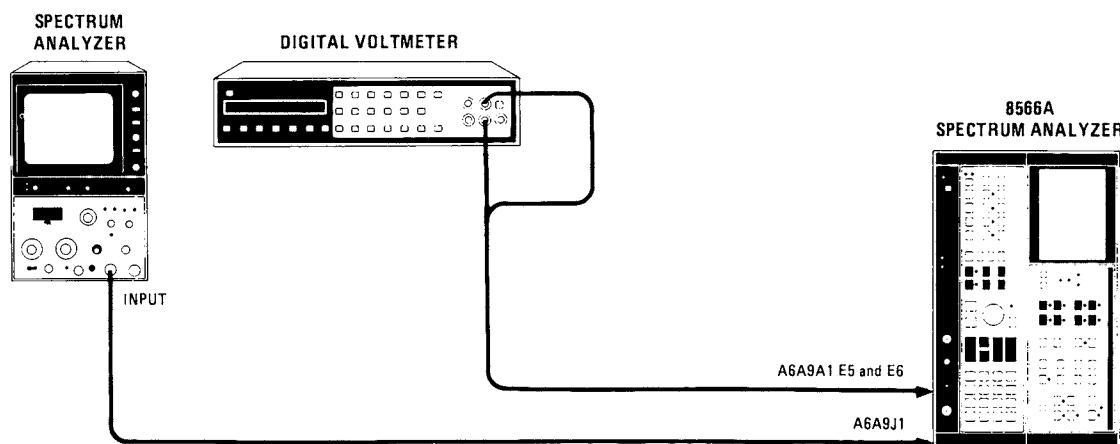


Figure 5-58. RF Module Phase Lock Adjustments Setup


ADJUSTMENTS

5-32. RF MODULE PHASE LOCK ADJUSTMENTS (Cont'd)

EQUIPMENT:

Spectrum Analyzer	HP 8558B/182T
Digital Voltmeter (DVM)	HP 3455A
BNC to SMB Snap-On Test Cable	Part of Service Accessories

PROCEDURE:

1. Place instrument on right side as shown in Figure 5-58 with bottom cover removed. Disconnect 82 and 84 (gray/red and gray/yellow) cables from A6A12 and remove A6 assemblies cover.
2. Remove A6A9 Phase Lock from instrument. Disconnect all cables. Remove cover. Place on extender board in instrument. Reconnect 100 MHz input 85 (gray/green) cable to J3 and reconnect 82 and 84 cables to A6A12 assembly.
3. Set 8566A LINE switch to ON and press  .

Sampler Match Adjustment

4. Connect DVM to A6A9A1E5. Refer to Figure 5-59 for location of E5.
5. Adjust A6A9A1C43 SAMPLER MATCH for maximum absolute DVM indication (disregard polarity). This is typically 0.6 Vdc. Note actual indication for later reference.
6. Connect DVM to A6A9A1E6. Refer to Figure 5-59 for location of E6.
7. Note absolute DVM indication. Difference between this indication and that noted in Step 5 (disregarding polarity) should be less than 0.16 Vdc. If difference between the two voltages is greater than 0.16 Vdc, replace Sampler A6A9U1.
8. Remove A6A9 Phase Lock and replace A6A9 cover. Reinstall A6A9 (on extender board) and reconnect all cables except red cable from 300 MHz output J1.

Tripler Adjustments

9. Set 8558B controls as follows:

Center Frequency	300 MHz
Freq Span/Div	100 MHz
Scale	10 dB/Div
Input Attenuation	40 dB
Reference Level	+30 dBm

ADJUSTMENTS

5-32. RF MODULE PHASE LOCK ADJUSTMENTS (Cont'd)

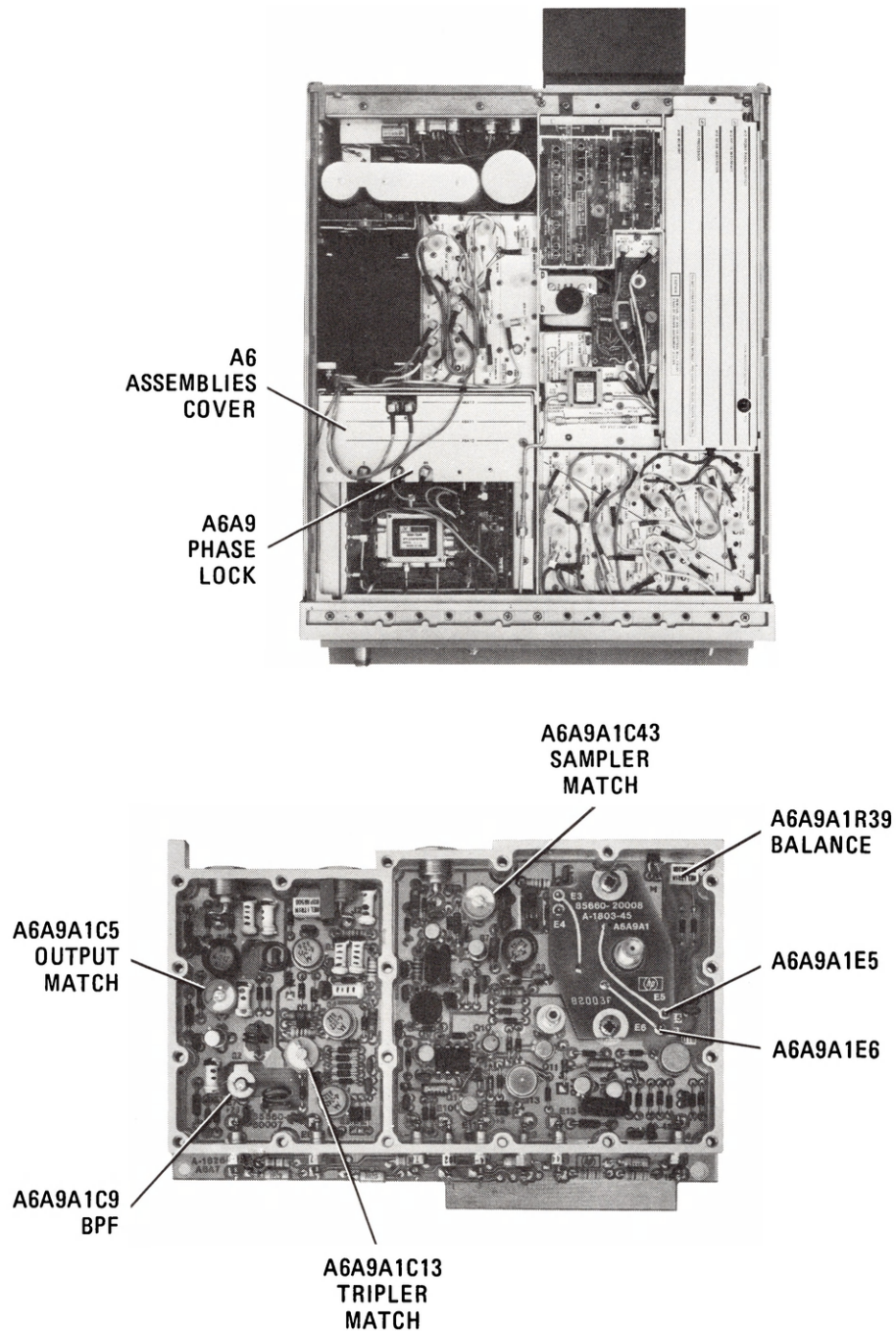




Figure 5-59. Location of RF Module Phase Lock Adjustments

10. Connect A6A9 Phase Lock 300 MHz OUTPUT (J1) to 8558B Spectrum Analyzer input.
11. Adjust 8558B Spectrum Analyzer Center Frequency and Reference Level as necessary to center signal on screen at convenient level.

5-32. RF MODULE PHASE LOCK ADJUSTMENTS (Cont'd)

12. Adjust A6A9A1C5 OUTPUT MATCH to reduce 300 MHz displayed signal level approximately 5 dB. This is to ensure that the output stage is not saturated during the following adjustment.
13. Adjust A6A9A1C9 BPF for maximum 300 MHz signal level as displayed on 8558B Spectrum Analyzer. The 300 MHz signal has a broad peak. Since harmonics of the signal exhibit greater response to this adjustment, the proper peak of the 300 MHz signal can be determined by observing the harmonic whose peak is coincident to the peak of the fundamental.
14. Adjust A6A9A1C13 TRIPLER MATCH for maximum 300 MHz signal level as displayed on 8558B Spectrum Analyzer. Adjust A6A9A1C5 for maximum 300 MHz signal displayed on the 8558B Spectrum Analyzer. This level should be greater than +17 dBm. (Typical is greater than +19 dBm.)
15. Set LINE switch to STANDBY. Remove A6A9 Phase Lock from extender board and reinstall in instrument. Reconnect all cables. Set LINE switch to ON and press  .

Balance Adjustment

16. Key in SWEEP  .
17. Connect DVM to A6A9J4 Tune Voltage output. (This can be done conveniently by disconnecting yellow cable from 2nd Converter TUNE and using a male SMB connector as an adapter.)
18. Adjust A6A9A1R39 BALANCE for DVM indication of -10.0 ± 0.5 Vdc.

5-33. CAL OUTPUT ADJUSTMENT

REFERENCE:

A6A9 Phase Lock

RELATED PERFORMANCE TEST:

Calibrator Amplitude Accuracy Test

DESCRIPTION:

A power meter is used to measure the output level of the 100 MHz CAL OUTPUT signal. This level is adjusted, if necessary, for specified level. Harmonic level of this calibrator output is checked using a spectrum analyzer.

5-33. CAL OUTPUT ADJUSTMENT (Cont'd)

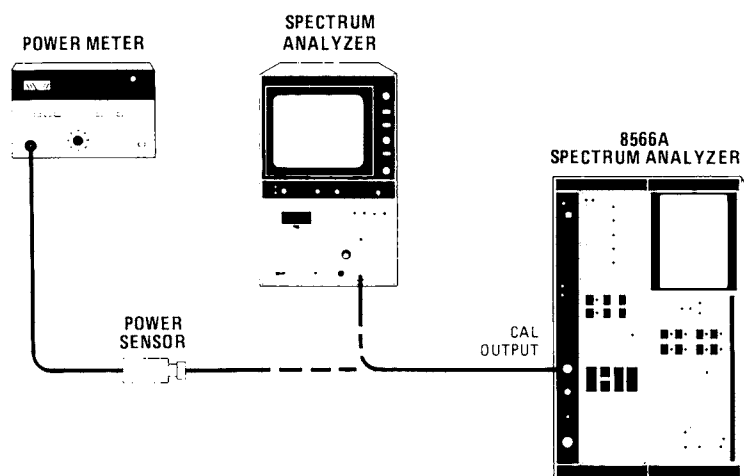


Figure 5-60. CAL OUTPUT Adjustment Setup

EQUIPMENT:

Power Meter/Power Sensor HP 436A/8481A
Spectrum Analyzer HP 8558B/182T

PROCEDURE:

1. Place instrument on right side as shown in Figure 5-60 with bottom cover removed. Remove A6 assemblies cover. Refer to Figure 5-61.
2. Connect power meter/power sensor to front-panel CAL OUTPUT connector.
3. Set LINE switch to ON and press 2-22 GHz pushbutton.
4. Set A6A9A1R20 CAL OUTPUT fully clockwise and record power meter indication.
5. Set A6A9A1R20 CAL OUTPUT fully counterclockwise and record power meter indication.
6. The full range of adjustment of A6A9A1R20 (Steps 4 and 5) should be -11 dBm to -9 dBm. If the range is on the low side, e.g. -13 dBm to -9.5 dBm, decrease the value of A6A9A1R19. If the range is on the high side, e.g. -10.5 dBm to -7 dBm, increase the value of A6A9A1R19. (Range of values for R19 is 750 to 909 ohms). Select value to place range as close as possible to -11 dBm to -9 dBm.
7. Adjust A6A9A1R20 CAL OUTPUT for power meter indication of -10.00 ± 0.01 dBm.

ADJUSTMENTS

5-33. CAL OUTPUT ADJUSTMENT (Cont'd)

8. Disconnect power meter/power sensor and connect 8558B Spectrum Analyzer to front-panel CAL OUTPUT connector.
9. Adjust 8558B Spectrum Analyzer to place the 100 MHz calibrator signal at left edge of display. Adjust 8558B Reference Level to place signal peak at top graticule line.
10. Note level of displayed harmonics. All harmonics should be greater than 25 dB down from peak of -10 dBm, 100 MHz calibrator signal.
11. If harmonics are not greater than 25 dB down, A6A9A1C13 TRIPLER MATCH may be adjusted to sufficiently reduce harmonics. If this adjustment is made however, it is necessary to recheck the A6A9J1 300 MHz OUTPUT (using the 8558B) to ensure output level is greater than +17 dBm. If output is too low, repeat steps 9 through 15 of Paragraph 5-32 and 8 through 10 of this procedure.
12. Replace A6 assemblies cover.

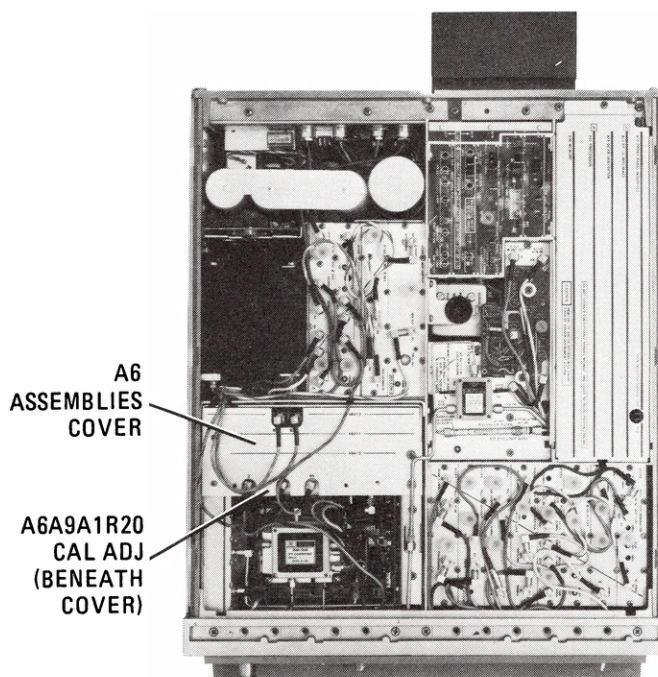


Figure 5-61. Location of CAL OUTPUT Adjustment

ADJUSTMENTS

5-34. LAST CONVERTER ADJUSTMENTS

REFERENCE:

A6A3 Last Converter

DESCRIPTION:

A 321.4 MHz signal (IF) is applied to the Last Converter using a signal generator and the 321.4 MHz Band-pass Filter adjusted. The 10.7 MHz frequency is nulled at the output by injecting a signal of 310.7 MHz at the input and adjusting the NOTCH ADJ to minimize the 10.7 MHz signal at the output.

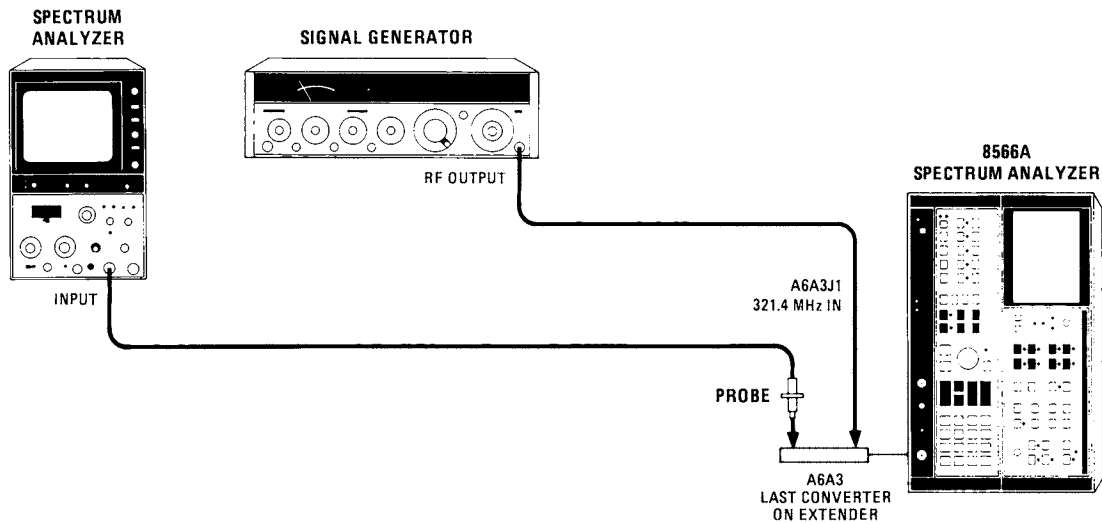


Figure 5-62. Last Converter Adjustments Setup

EQUIPMENT:

Signal Generator	HP 8640B
Spectrum Analyzer	HP 8557A/182T
2x15 Pin Extender Board	Part of Service Accessories
Probe (SMB Male Bulkhead Connector)	HP 1250-0691
BNC to SMB Snap-On Test Cable (2 required)	Part of Service Accessories

ADJUSTMENTS

5-34. LAST CONVERTER ADJUSTMENTS (Cont'd)

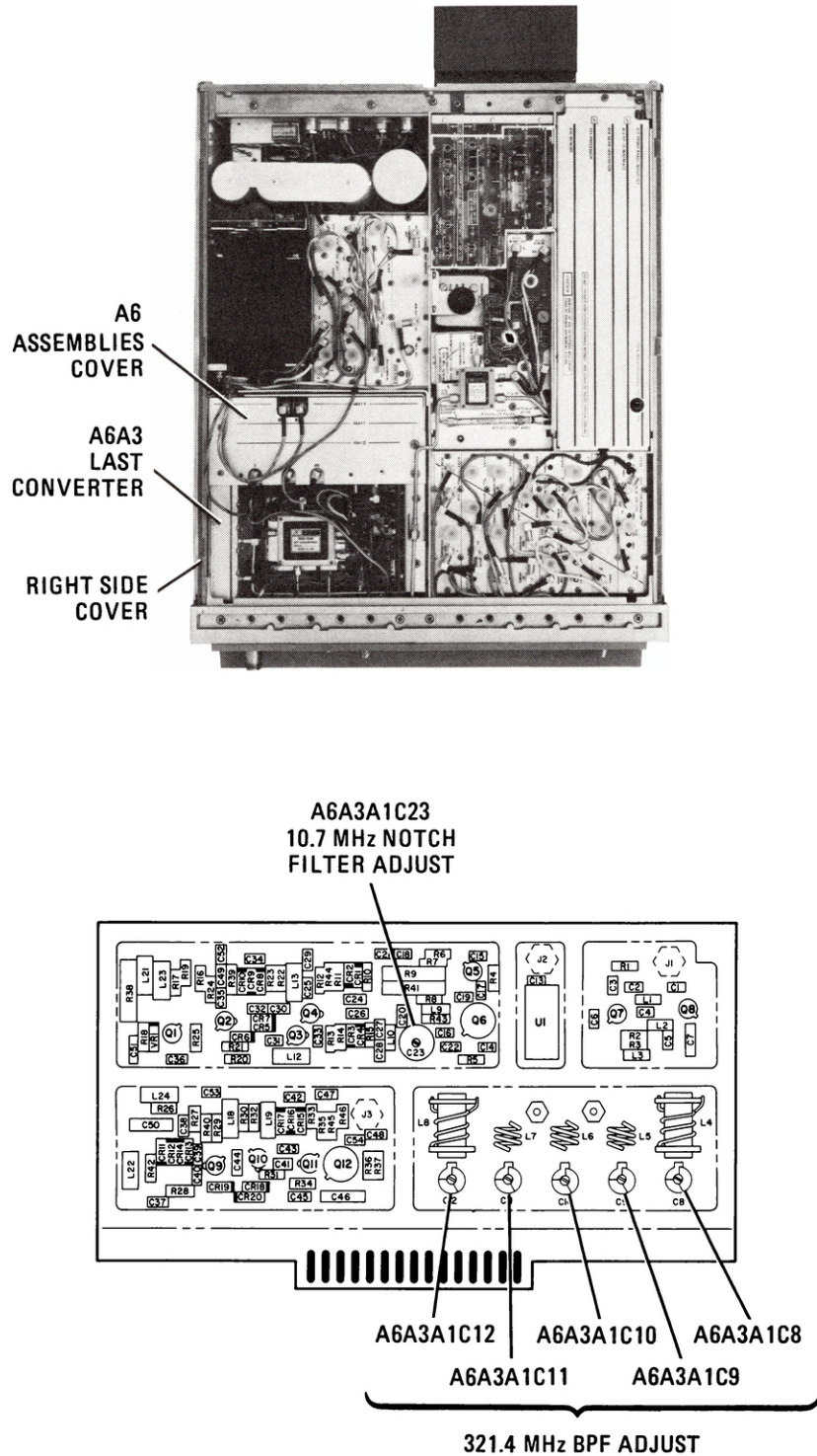


Figure 5-63. Location of Last Converter Adjustments

5-34. LAST CONVERTER ADJUSTMENTS (Cont'd)

PROCEDURE:

1. Set LINE switch to STANDBY. Place instrument upside down and remove bottom cover. Remove A6 assemblies cover and remove A6A9 through A6A12 assemblies.
2. Remove RF Section right side cover and remove two screws attaching A6A3. Remove A6A3 Last Converter and place on extender board. Place instrument on right side as shown in Figure 5-62.
3. Disconnect 321.4 MHz IN (brown cable) and 21.4 OUT (gray/brown cable) from A6A3 Last Converter. Leave 300 MHz IN (red cable) connected. Reinstall A6A9 through A6A12 assemblies.
4. Adjust A6A3 Bandpass Filter Adjustments A6A3A1C8, C9, C10, C11, and C12 to maximum capacitance position (plates fully meshed). Refer to Figure 5-63 for location of adjustments.
5. Set 8566A LINE switch to ON. Press 0-25
GHz , SWEEP SINGLE .
6. Connect BNC to SMB snap-on cable and probe (SMB male bulkhead connector) to input of 8557A Spectrum Analyzer.
7. Set 8557A controls as follows:

Center Frequency	321.4 MHz
Frequency Span/Division	5 MHz
Resolution Bandwidth	1 MHz
Reference Level	−30 dBm
Input Attenuation	0 dB
8. Set 8640B Signal Generator for an output of 321.40 MHz at −20 dBm and connect output to A6A3J1 321.4 MHz IN.
9. Place probe connected to 8557A in adjustment hole above A6A3A1C9. Do not allow probe tip to touch capacitor, indicated by a sudden jump in signal level on 8557A CRT display.
10. Using a non-metallic adjustment tool, adjust A6A3A1C8 for highest signal level (maximum) as displayed on 8557A Spectrum Analyzer.
11. Move probe to adjustment hole above A6A3A1C8. Do not allow probe tip to touch capacitor.
12. Adjust A6A3A1C9 for lowest signal level (minimum) as displayed on 8557A Spectrum Analyzer.
13. Adjust A6A3A1C10 for highest signal level (maximum) as displayed on 8557A Spectrum Analyzer.
14. Adjust A6A3A1C11 for lowest signal level (minimum) as displayed on 8557A Spectrum Analyzer.

ADJUSTMENTS

5-34. LAST CONVERTER ADJUSTMENTS (Cont'd)

15. Adjust A6A3A1C12 for highest signal level (maximum) as displayed on 8557A Spectrum Analyzer.
 16. Remove probe (SMB male bulkhead connector) from cable connected to 8557A.
 17. Set 8557A controls as follows:

Center Frequency (TUNING)	LO Feedthrough at left edge
Frequency Span/Division	2 MHz
Resolution Bandwidth	300 kHz
Reference Level	−30 dBm
Input Attenuation	0 dB
 18. Set 8640B Signal Generator output to 310.70 MHz at −40 dBm.
 19. Connect cable from 8557A Spectrum Analyzer to A6A3J3 21.4 MHz OUT.
 20. Adjust A6A3A1C23 10.7 MHz Notch Filter adjustment for minimum signal level as displayed on 8557A Spectrum Analyzer.
 21. Set LINE switch to STANDBY. Reinstall A6A3 Last Converter and A6A9 through A6A12 assemblies. Reinstall covers and reconnect all cables.
-

5-35. FREQUENCY RESPONSE ADJUSTMENTS

REFERENCE:

A6A10 Miscellaneous Bias/Relay Driver
A6A11 Slope Generator
A6A12 YTX Driver

RELATED PERFORMANCE TEST:

Frequency Response Test

DESCRIPTION:

Frequency Response (flatness) is adjusted in five parts corresponding to the five harmonic bands of the analyzer (.01-2.5 GHz, 2.0-5.8 GHz, 5.8-12.5 GHz, 12.5-18.6 GHz, and 18.6-22 GHz). In each band, the analyzer is swept with a sweep oscillator over the frequency range to be adjusted. The sweep of the sweep oscillator is programmed using the SWEEP+TUNE (−1V/GHz) output of the analyzer and a special Tuning Voltage Circuit to provide phase locking of the analyzer to the sweep oscillator. The bands are adjusted for optimum flatness and equal amplitudes.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

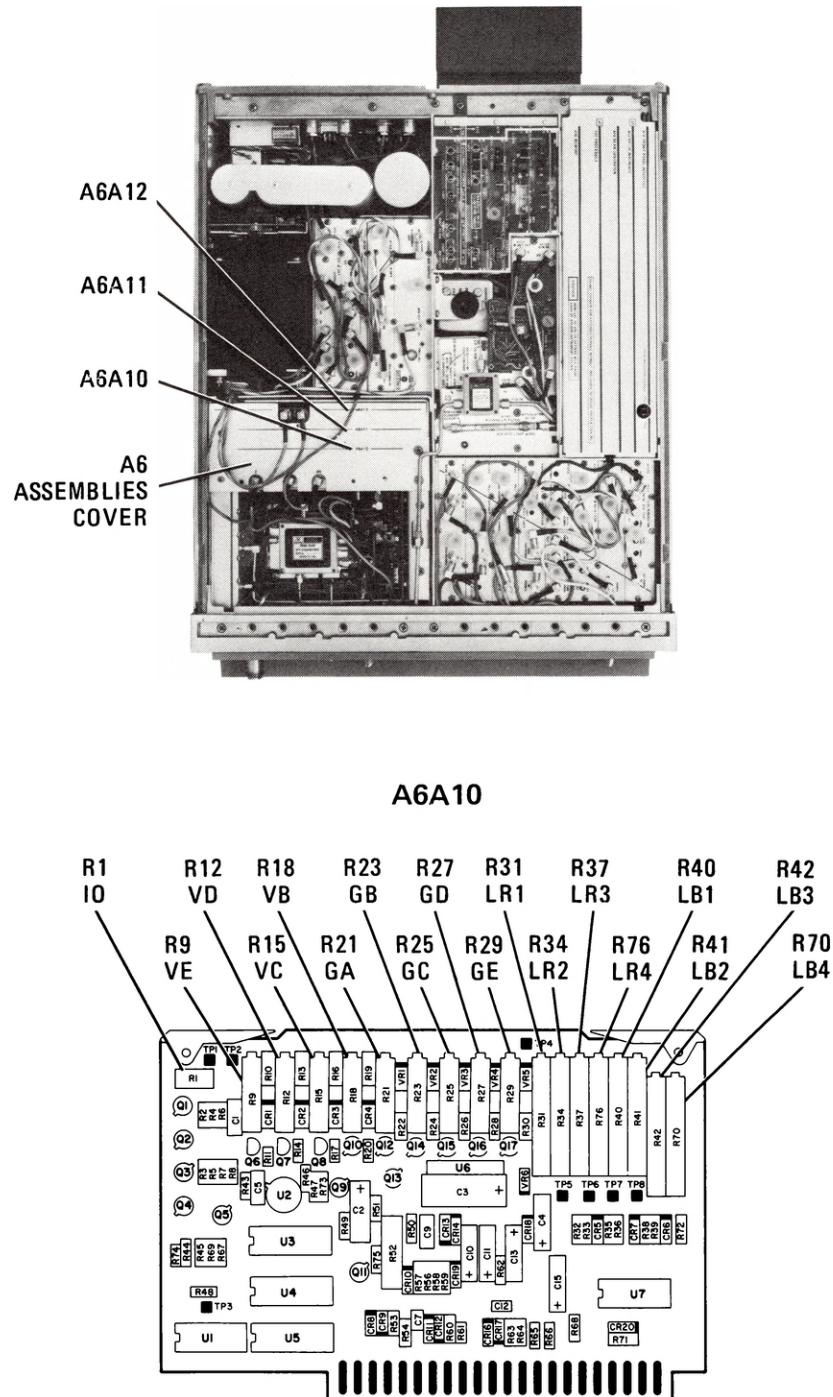
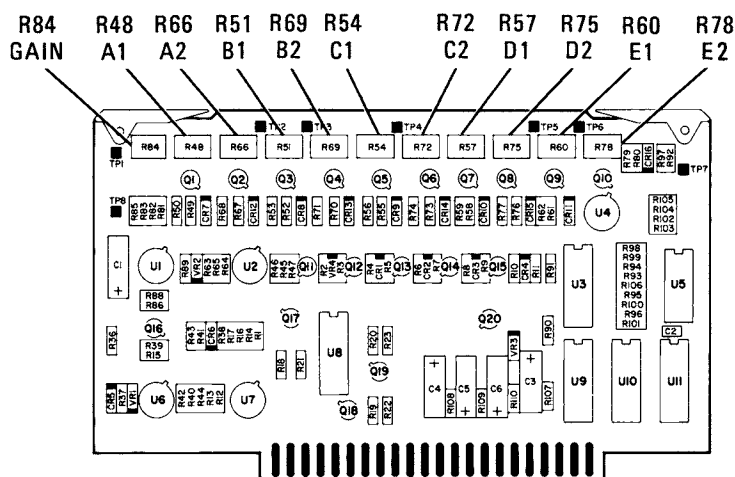


Figure 5-64. Location of Frequency Response Adjustments (1 of 2)

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

A6A11



A6A12

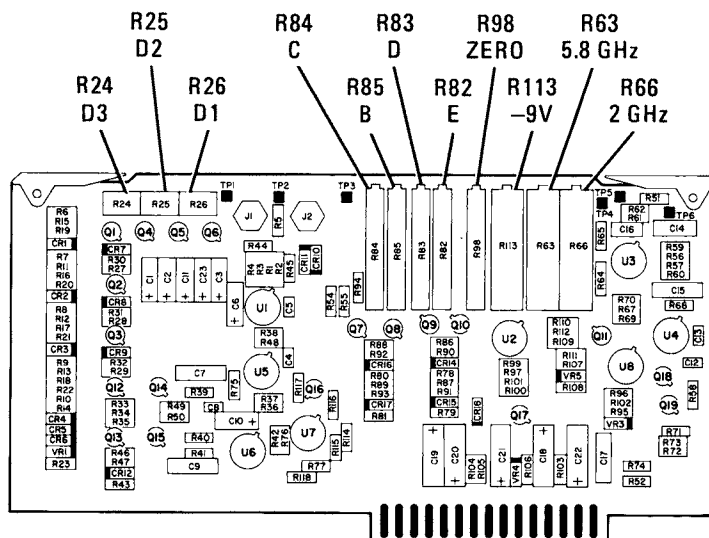


Figure 5-64. Location of Frequency Response Adjustments (2 of 2)

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

EQUIPMENT:

Sweep Oscillator	HP 8620C
RF Plug-In (2-22 GHz)	HP 86290B, Opt. H08
RF Plug-In (.01-2.4 GHz)	HP 86222A
Power Meter/Thermistor Mount (18-22 GHz)	HP 432A/K486A
Power Meter/Power Sensor (.01-18 GHz)	HP 432A/8478B
Synchronizer	HP 8709A, Opt. H10
Digital Voltmeter (DVM)	HP 3455A
Function Generator	HP 3310A
Cable Assembly, SMA Male Connectors	B&W 55-S142-55-24
20 dB Attenuator	HP 8491B, Opt. 020
Adapter, K-Band Waveguide – SMA Female	Maury K210C
Adapter, Type N Male to SMA Female	HP 1250-1250
Adapter, Type N Female to SMA Female	HP 86290-60005
Adapter, Type N Female to BNC Male	HP 1250-0077
Tuning Voltage Circuit.	Refer to Figure 5-80

PROCEDURE:

A. Preset of Adjustments (Refer to Figure 5-64 for locations)

1. Position instrument on right side as shown in Figure 5-65 with bottom cover removed.
2. Remove A6 assemblies cover. Jumper A12TP2 to A12TP3 (Lock Indicator Disable).
3. If A6A3 Last Converter has been replaced, or either the Slope Attenuator circuit in the Last Converter or the Slope Generator output stage in the A6A11 Slope Generator has been repaired, begin at Step A6.
4. If major repair such as replacement of A6A10 Miscellaneous Bias/Relay Driver or A6A12 YTX Driver has been performed, begin at Step A-8.
5. If minor repair has been performed or this adjustment is being performed as a result of the performance test in Section IV indicating an out of tolerance condition, begin at Step A-12.
6. Adjust A6A11R84 GAIN fully clockwise.
7. Adjust all other potentiometers on the A6A11 Slope Generator to mid-position.
8. Adjust A6A12 YTX Driver Delay Compensation adjustments D1-A6A12R26, D2-A6A12R25, and D3-A6A12R24 to mid-position.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

9. Adjust A6A12 YTX Driver IF Offsets B-A6A12R85, C-A6A12R84, D-A6A12R83, and E-A6A12R82 fully counterclockwise.
10. Adjust A6A10 YTX Bias adjustments VB-A6A10R18, VC-A6A10R15, VD-A6A10R12, and VE-A6A10R9 fully clockwise.
11. Adjust A6A10 IF Step Gain Adjustments GA-A6A10R21, GB-A6A10R23, GC-A6A10R25, GD-A6A10R27, and GE-A6A10R29 to a position eight turns from the clockwise end of the adjustment range.
12. Adjust A6A10 YTX Linearity adjustments LB1-A6A10R40, LB2-A6A10R41, LB3-A6A10R42, LB4-A6A10R70, LR1-A6A10R31, LR2-A6A10R34, LR3-A6A10R37, and LR4-A6A10R76 fully counterclockwise.
13. Adjust front-panel AMPTD CAL to mid-position.

B. Preliminary Adjustments

1. All of the following adjustments must be performed if complete realignment is necessary due to major repair of the A6 RF Module.
2. If minor realignment is necessary due to minor repair of the A6 RF Module, perform steps B-3 through B-16 of this section then proceed to section C. Refer to step A-5 for explanation of minor repair.
3. Connect power meter/thermistor mount to front-panel CAL OUTPUT connector using a Type N Female to BNC Male adapter. Verify that calibrator signal level is at $-10 \text{ dBm} \pm 0.1 \text{ dB}$. If not, refer to Paragraph 5-33 for adjustment procedure.
4. Set equipment controls as follows:

8620C:

SWEEP

Mode	EXT
Trigger	EXT
Time	100-10
Vernier	Fully CW

86290B:

RF OFF/ON	OFF
ALC	INT
Power Level	Fully CCW
FM-NORM-PL (rear panel)	PL

8709A:

Sensitivity	6 MHz/Volt
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ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

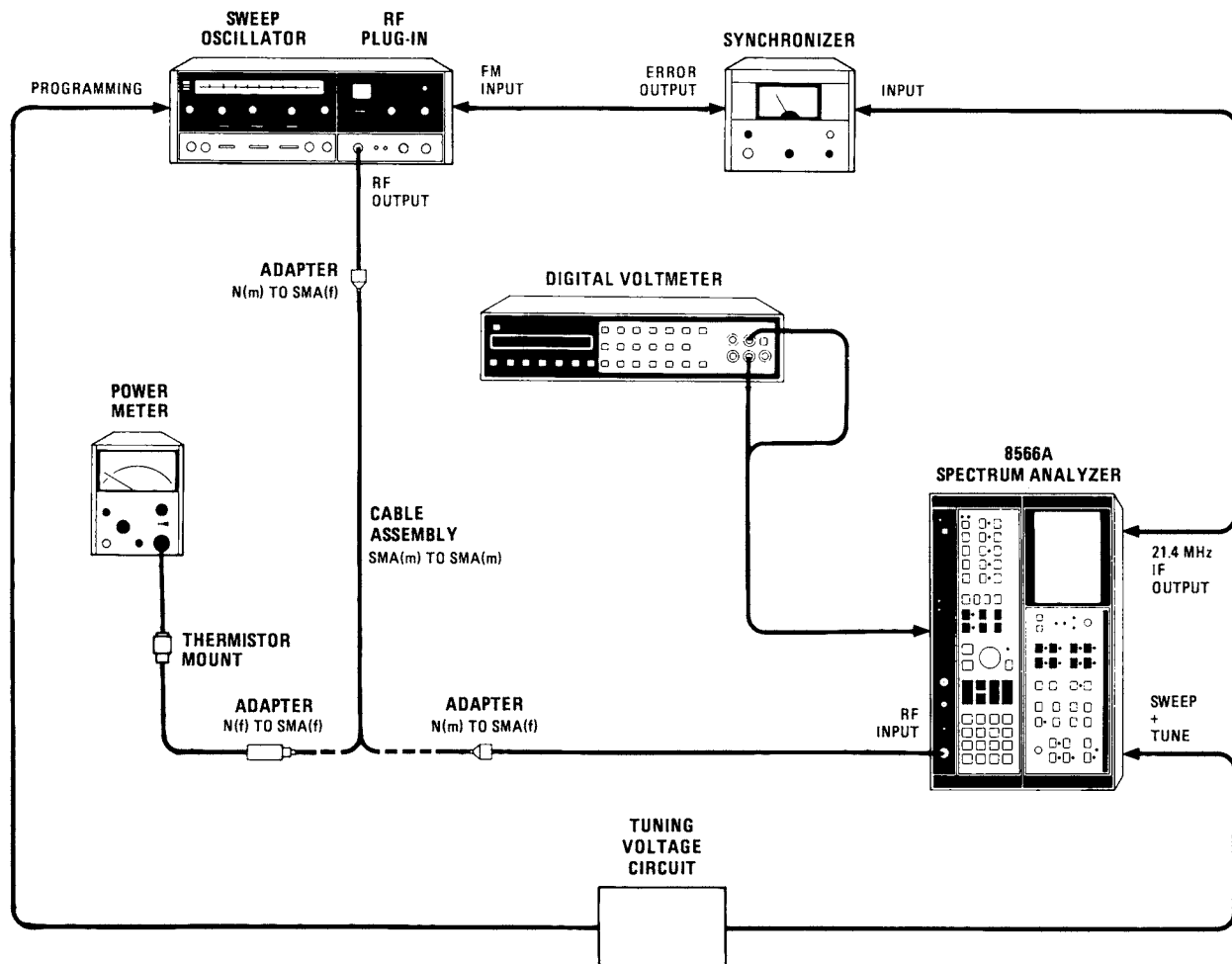


Figure 5-65. Frequency Response Preliminary Adjustments Setup

5. Disconnect power meter/thermistor mount from CAL OUTPUT and connect equipment as shown in Figure 5-65 with power meter/mount connected to sweep oscillator.
6. Set sweep oscillator for CW mode and CW marker pointer to 2 GHz in Band 4 (2-22 GHz).
7. Turn synchronizer LINE power OFF.
8. Turn 86290B RF ON and adjust POWER LEVEL for -15 dBm on power meter. Disconnect power meter/mount and connect sweep oscillator to spectrum analyzer. Set sweep oscillator to Full Sweep (2-22 GHz).









ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

9. Set analyzer LINE switch to ON and press pushbutton. Instrument must remain in preset condition and sweep for one-half hour before performing adjustments. Key in , SWEEP .
10. Connect DVM to A6A12TP3 with ground lead to A6A12TP2.
11. Adjust A6A12R113 -9V adjustment for DVM indication of $-9.000 \pm 0.001 \text{ Vdc}$.
12. Key in 4 GHz, 0 Hz.
13. Connect DVM to A6A12TP5, ground to A6A12TP2.
14. Adjust A6A12R85 B IF Offset adjustment for DVM indication of $-2.100 \pm 0.001 \text{ Vdc}$.
15. Key in 0 Hz.
16. Remove 82 (gray/red) cable from A6A12J2 Sweep+Tune output and connect DVM to A6A12J2.
17. Adjust A6A12R98 ZERO adjustment for DVM indication of $0.000 \pm 0.001 \text{ Vdc}$.
18. Connect DVM to A6A10TP1 with ground lead to A6A10TP2.
19. Adjust A6A10R1 IO adjustment for DVM indication of $+0.15 \pm 0.01 \text{ Vdc}$.
20. Key in 2.0 GHz, 5.8 GHz, SWEEP .
21. Set 8620C Sweep Oscillator for a 5.7 GHz CW signal.
22. Adjust A6A12R63 5.8 GHz adjustment to maximize the 5.7 GHz signal on the 8566A display.
23. Set 8620C Sweep Oscillator for a 2.1 GHz CW signal.
24. Adjust A6A12R66 2 GHz adjustment to maximize the 2.1 GHz signal on the 8566A display.
25. Set 8620C Sweep Oscillator to Full Sweep in Band 4 (2-22 GHz sweep).
26. Turn 8709A LINE power ON and set ERROR SIGNAL switch to minus (–). Key in 2 sec on 8566A.
27. Adjust special Tuning Voltage Circuit GAIN and OFFSET to lock the 8709A as the 8566A sweeps from 2.0 to 5.8 GHz.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

28. Adjust A6A12R63 5.8 GHz adjustment for maximum signal amplitude at 5.8 GHz on the 8566A display.
29. Adjust A6A12R66 2 GHz adjustment for maximum signal amplitude at 2 GHz on 8566A display.
30. Adjust A6A10R18 YTX Bias VB for maximum amplitude of overall signal level from 2 to 5.8 GHz on the 8566A display.
31. Key in  5.8 GHz,  7 GHz,  50 msec.
32. Turn 8709A LINE power OFF.
33. Set 8620C Sweep Oscillator for a 6 GHz CW signal.
34. Adjust A6A12R84 C IF Offset for maximum signal amplitude at 6 GHz on 8566A display.
35. Turn 8709A LINE power ON and set ERROR SIGNAL switch to plus (+).
36. Set 8620C Sweep Oscillator for Full Sweep in Band 4 (2-22 GHz sweep).
37. Key in  12.5 GHz,  2 sec.
38. Adjust special Tuning Voltage Circuit GAIN and OFFSET to lock 8709A as the 8566A sweeps from 5.8 to 12.5 GHz.
39. Adjust A6A12R84 C IF Offset for maximum signal amplitude at 5.8 GHz on the 8566A Display. Ignore flatness at upper end of band.
40. Adjust A6A10R15 VC YTX Bias for maximum amplitude of overall signal level from 5.8 to 12.5 GHz.
41. Key in  12.5 GHz,  15 GHz,  50 msec.
42. Turn 8709A LINE power OFF.
43. Set 8620C Sweep Oscillator for a 15 GHz CW signal.
44. Adjust A6A12R83 D IF Offset for maximum signal amplitude at 15 GHz on the 8566A display.
45. Turn 8709A Synchronizer LINE power ON.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

46. Set 8620C Sweep Oscillator for Full Sweep in Band 4 (2-22 GHz sweep).
47. Key in STOP FREQ 18.6 GHz, SWEEP TIME 2 sec.
48. Adjust special Tuning Voltage Circuit GAIN and OFFSET to lock 8709A as the 8566A sweeps from 12.5 to 18.6 GHz.
49. Adjust A6A12R83 D IF Offset for maximum signal amplitude at 12.5 GHz on the 8566A display.
50. Adjust A6A10R12 VD YTX Bias for maximum amplitude of overall signal level from 12.5 to 18.6 GHz.
51. Key in START FREQ 18.6 GHz, STOP FREQ 22 GHz, SWEEP TIME 50 msec.
52. Turn synchronizer LINE power OFF.
53. Set 8620C Sweep Oscillator for a 20 GHz CW signal.
54. Adjust A6A12R82 E IF Offset for maximum signal amplitude at 20 GHz on the 8566A display.
55. Turn synchronizer LINE power ON. Key in SWEEP TIME 2 sec on 8566A.
56. Set 8620C Sweep Oscillator for Full Sweep in Band 4 (2-22 GHz sweep).
57. Set special Tuning Voltage Circuit GAIN and OFFSET to lock 8709A as 8566A sweeps from 18.6 to 22 GHz. Adjust 86290B PEAK control for best presentation on 8566A display.
58. Adjust A6A12R82 E IF Offset for maximum signal amplitude at 18.6 GHz on the 8566A display.
59. Adjust A6A10R9 VE YTX Bias for maximum amplitude of overall signal level from 18.6 to 22 GHz.

C. Final Flatness Calibration

1. If adjustments on A6A11 Slope Generator were preset in Steps A-6 and A-7, perform the following step. If not, skip to Step C-3.
2. Key in CENTER FREQUENCY 4 GHz, FREQUENCY SPAN 0 Hz, SCALE LOG ENTER dB/DIV 5 dB. Set 8709A ERROR SIGNAL switch to minus (–) and adjust special Tuning Voltage Circuit GAIN and OFFSET to lock 8709A. Press REFERENCE LEVEL pushbutton and adjust DATA knob to place signal trace on a graticule line. Adjust A6A11R84 Slope GAIN to move signal trace down one division on the 8566A Display.

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

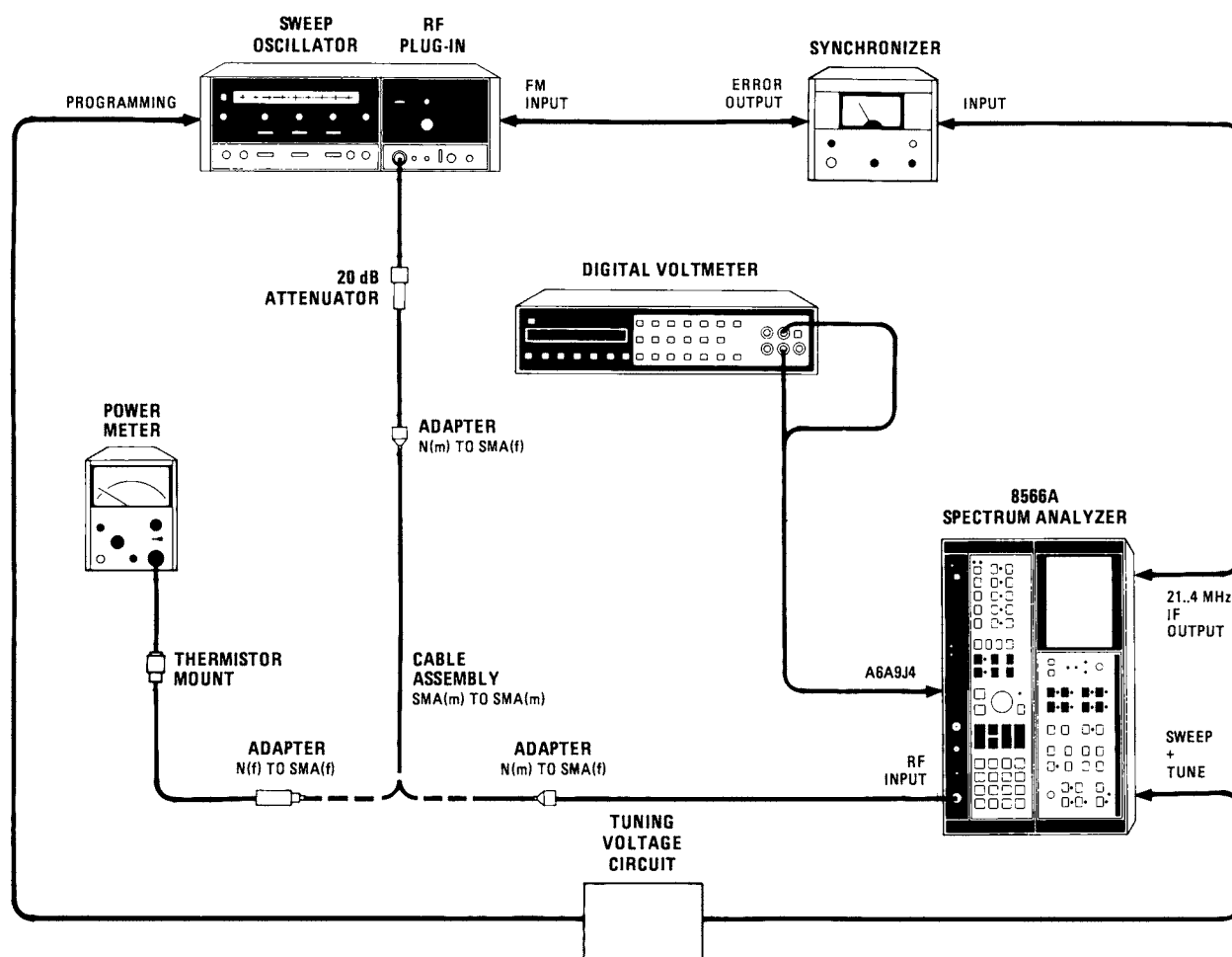


Figure 5-66. Frequency Response Adjustments Setup (10 MHz to 2.4 GHz)

10 MHz to 2.4 GHz

3. Replace 86290B RF Plug-In with 86222A RF Plug-In (.01—2.4 GHz) and connect equipment as shown in Figure 5-66 with power meter/mount connected to sweep oscillator. Connect Tuning Voltage power supply as follows: +20V to A17TP4, -10V to A18TP4, and Ground to any convenient chassis ground.
4. Set 8620C to CW mode and set CW Marker position to 2.0 GHz. Adjust 86222A RF Output level for -15 dBm. Do not change RF Output Level during remainder of procedure.
5. Press 0-2.5 GHz on 8566A, then key in SCALE LOG ENTER dB/DIV 1 dB, and REFERENCE LEVEL -13 dBm.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

6. Measure power out of RF Plug-In every 200 MHz between 10 MHz and 2.5 GHz and plot power meter indication at corresponding location on 8566A CRT. (This location may be discerned by using the MARKER function to place a marker at the frequency being plotted.)
7. Disconnect power meter/mount and connect RF Plug-In RF Output to 8566A RF Input using same cable used to connect power meter.
8. Set 8620C Sweep Oscillator for Full Sweep (.01 to 2.4 GHz sweep) and sweep time for ≥ 10 sec.
9. Key in 2 sec.
10. Set special Tuning Voltage Circuit RANGE switch to LO position and adjust GAIN to lock the 8709A between 10 MHz and 2.5 GHz. (Make sure RF Plug-In rear-panel switch is set to PL.)
11. Adjust 8566A if necessary, to place signal trace in upper half of display.
12. Adjust A6A11 Band A Segment adjustments A1 (A6A11R48) and A2 (A6A11R66) to align trace as closely as possible to the curve plotted in Step 6. (Change if necessary.) A1 controls the low-frequency end of the trace and A2 controls the high-frequency end.
13. Key in -13 dBm.
14. Adjust A6A10 Band A IF Step Gain adjustment GA (A6A10R21) to align trace as closely as possible to the curve plotted in Step 6. Do not change . Counterclockwise rotation of adjustment moves trace up.
15. Total deviation of signal trace from the curve plotted in Step 6 must be less than 1.2 dB.
16. If necessary, repeat steps C-12 through C-15 to meet tolerance requirements. When met, remove curve plotted on 8566A CRT.
17. Key in -9 dBm, 50 MHz, 100 MHz, 3 MHz, SWEEP TIME .
18. Connect CAL OUTPUT to RF INPUT.
19. Adjust A6A10 Band A IF Step Gain Adjustment GA (A6A10R21) to place calibrator signal peak at -10 dBm (one division down from top of graticule).

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

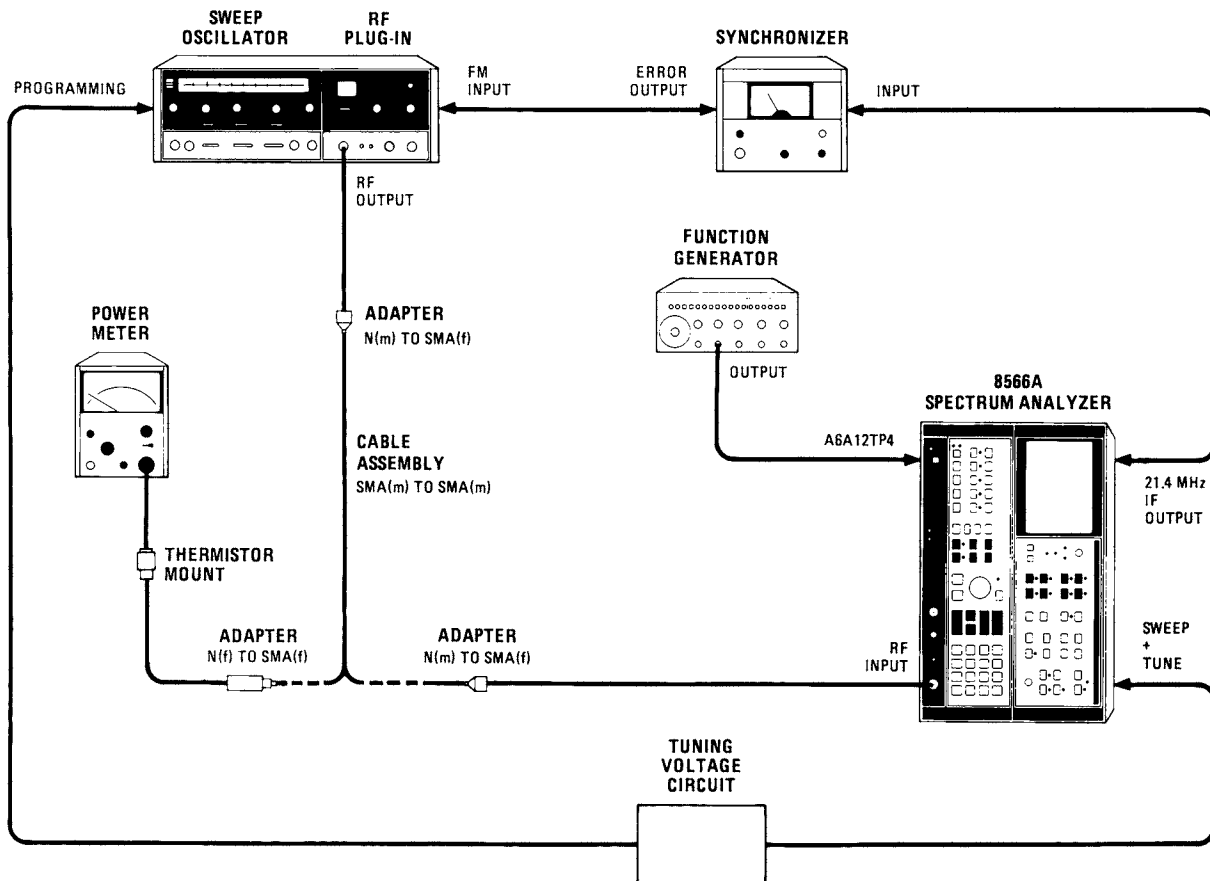


Figure 5-67. Frequency Response Adjustments Setup (2.0–18.6 GHz)

2.0 to 5.8 GHz

20. Replace 86222A RF Plug-In with 86290B RF Plug-In (2-22 GHz) and connect equipment as shown in Figure 5-67 with power meter/mount connected to sweep oscillator without attenuator.
21. Press 2-22 GHz then key in START FREQ 2.0 GHz, STOP FREQ 5.8 GHz, SCALE LOG ENTER dB/DIV 1 dB, and REFERENCE LEVEL -13 dBm.
22. Set 8620C Sweep Oscillator to CW Mode and set CW Marker pointer to 2.0 GHz.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

23. Adjust RF Plug-In Output Level for -15 dBm. Do not change RF Output level during remainder of procedure.
 24. Measure power out of RF Plug-In every 200 MHz between 2.0 GHz and 5.8 GHz and plot power meter indication at corresponding location on 8566A CRT. (This location may be discerned by using the MARKER function to place a marker at the frequency being plotted.)
 25. Disconnect power meter/mount and connect RF Plug-In RF Output to 8566A RF Input using same cable used to connect power meter.
 26. Set sweep oscillator to Full Sweep (2—22 GHz).
 27. Key in SCALE LOG 5 dB, 1 sec, 100 kHz on 8566A.
 28. Set special Tuning Voltage Circuit RANGE switch to HI and adjust GAIN and OFFSET to lock 8709A between 2.0 and 5.8 GHz. (Be sure 8709A ERROR signal switch is in minus (–) position.)
 29. Adjust 8566A , if necessary, to place signal trace in upper half of display.
 30. Connect output of function generator to A6A12TP4.
 31. Set function generator output for 15 Volt peak-to-peak 20 Hz sine wave.
 32. Adjust 5.8 GHz adjustment A6A12R63 for smallest peak-to-peak deviation of signal trace at 5.8 GHz on 8566A display.
 33. Adjust A6A12R66 2 GHz adjustment for smallest peak-to-peak deviation of signal trace at 2.0 GHz on 8566A display.
 34. Turn function generator LINE power OFF.
 35. Key in SCALE LOG 2 dB. Press and adjust DATA knob to place signal trace on curve plotted in Step 24.
 36. Adjust A6A10R18 VB YTX Bias adjustment for maximum amplitude.
 37. Adjust A6A11 Band B Segment adjustments B1 (A6A11R51) and B2 (A6A11R69) for best alignment to curve plotted in Step 24. B1 controls the low-frequency end of the trace and B2 controls the high-frequency end. Adjust as necessary to keep signal trace on curve plotted.
 38. Key in -13 dBm, SCALE LOG 1 dB.
-

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

39. Adjust A6A10 Band B IF Step Gain adjustment GB (A6A10R23) to align signal trace as closely as possible to the curve plotted in Step 24. Counterclockwise rotation of GB moves trace up.
40. Turn function generator LINE power ON. Press TRACE A .Total deviation of signal trace from curve plotted in Step 24 must be less than 3.0 dB.
41. If necessary, repeat steps 35 through 40 to meet tolerance requirements. When met, remove curve plotted on 8566A CRT and press TRACE A .

5.8 to 12.5 GHz

42. Set 8620C to CW mode and set CW Marker pointer to 5.8 GHz.
43. Key in 5.8 GHz, 12.5 GHz, SWEEP TIME , SCALE LOG 1 dB, and -13 dbm.
44. Connect power meter/mount to sweep oscillator using same cable used to connect to 8566A.
45. Measure power out of RF Plug-In every 200 MHz between 5.8 GHz and 12.5 GHz and plot power meter indication at corresponding location on 8566A CRT. (This location may be discerned by using the MARKER function to place a marker at the frequency being plotted.)
46. Disconnect power meter/mount and connect RF Plug-In RF Output to 8566A RF Input using same cable used to connect power meter.
47. Set 8620C to Full Sweep (2—22 GHz).
48. Key in SCALE LOG 5 dB, 2 sec, 100 kHz.
49. Set ERROR SIGNAL switch on 8709A to plus (+).
50. Adjust special Tuning Voltage Circuit GAIN and OFFSET to lock 8709A between 5.8 and 12.5 GHz.
51. Press pushbutton and adjust DATA knob to place signal trace on curve plotted in Step 45.
52. Turn function generator LINE power ON.
53. Adjust A6A12R84 Band C IF Offset for minimum peak-to-peak deviation of trace at 5.8 GHz.
54. At some point above 5.8 GHz, the frequency response will begin to go bad, as indicated by a larger peak-to-peak deviation of signal trace on the 8566A display. Refer to Figure 5-68.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

55. Press MARKER and adjust marker to point on trace where this begins to occur. Refer to Figure 5-68.
56. Turn function generator LINE power OFF.
57. Adjust A6A10 YTX Linearity Correction adjustment LB1 (A6A10R40) in a clockwise direction while monitoring the 8566A display.
58. As LB1 is adjusted clockwise, the amplitude of the signal trace will drop beginning at the right edge of the graticule. Refer to Figure 5-69.
59. Adjust LB1 to position the roll-off point at the position of the marker. Do not change the marker position.
60. Turn function generator LINE power ON.
61. Adjust A6A10 YTX Linearity Correction adjustment LR1 (A6A10R31) to minimize the peak-to-peak deviation of the signal trace between the marker position and 12.5 GHz.
62. Key in SCALE LOG 2 dB.
63. Turn function generator LINE power OFF.
64. Press pushbutton and adjust using DATA knob to keep trace on curve plotted in Step 45.
65. Adjust A6A10 Band C YTX Bias adjustment VC (A6A10R15) for maximum amplitude.
66. Adjust A6A11 Band C Segment adjustments C1 (A6A11R54) and C2 (A6A11R72) for best alignment of signal trace to curve plotted in Step 45. C1 controls low-frequency end of trace and C2 controls high-frequency end.
67. Key in -13 dBm, SCALE LOG 1 dB.
68. Adjust A6A10 Band C IF Step Gain adjustment GC (A6A10R25) to align the signal trace as closely as possible to the curve plotted in Step 45. Counterclockwise rotation of GC moves trace up.
69. Turn function generator LINE power ON. Press TRACE A . Total deviation of signal trace from the curve plotted in Step 45 should be less than 3.0 dB. When met, remove curve plotted on 8566A CRT and press TRACE A .

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

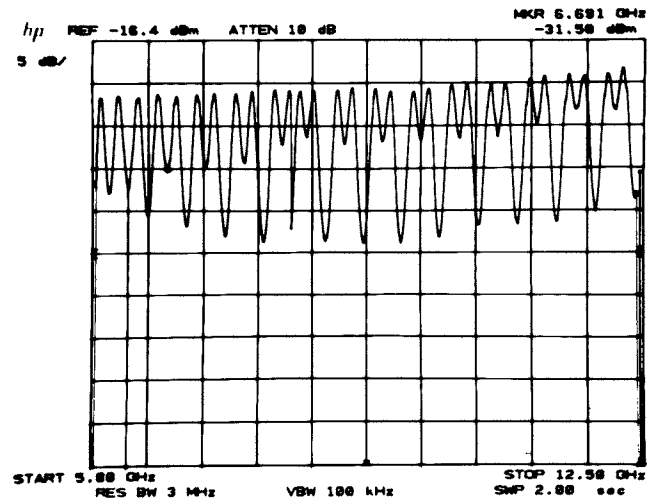


Figure 5-68. Typical Display Showing Modulation

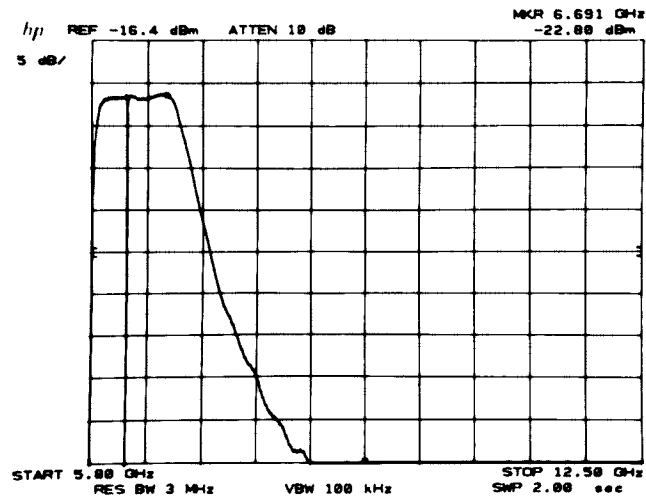


Figure 5-69. Typical Display Showing Roll-Off Point

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

12.5 to 18.6 GHz

70. Set 8620C to CW Mode and set CW Marker pointer to 12.5 GHz.
71. Key in 12.5 GHz, 18.6 GHz, SWEEP TIME , SCALE LOG 1 dB, and -13 dBm.
72. Connect power meter/mount to sweep oscillator output using the same cable used to connect to the 8566A.
73. Measure power out of RF Plug-In every 200 MHz between 12.5 GHz and 18.6 GHz and plot power meter indication at corresponding location on 8566A CRT. (This location may be discerned by using the MARKER function to place a marker at the frequency being plotted.) Note indication at 18.6 GHz for reference later.
74. Disconnect power meter/mount and connect RF Plug-In RF Output to 8566A RF Input using same cable used to connect power meter.
75. Set 8620C to Full Sweep (2—22 GHz).
76. Key in SCALE LOG 5 dB, 1 sec, 100 kHz.
77. Adjust special Tuning Voltage Circuit GAIN and OFFSET to lock 8709A between 12.5 and 18.6 GHz.
78. Press pushbutton and adjust DATA knob to place signal trace plotted in Step 73.
79. Turn function generator LINE power ON and adjust for 18 volt peak-to-peak 20 Hz output.
80. Adjust A6A12 Band D IF Offset A6A12R83 for minimum peak-to-peak deviation of signal trace at 12.5 GHz.
81. At some point above 12.5 GHz, the frequency response will begin to go bad as indicated by a larger peak-to-peak deviation of signal trace on 8566A CRT.
82. Press MARKER and adjust marker to point on trace where this begins to occur. Refer to Figure 5-68 for typical display.
83. Turn function generator LINE power OFF.
84. Adjust A6A10 YTX Linearity Correction adjustment LB2 (A6A10R41) in a clockwise direction while monitoring the 8566A display.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

85. As LB2 is adjusted clockwise, the amplitude of the trace will drop, beginning at the right edge of the graticule.
 86. Adjust LB2 to position the roll-off point at the position of the marker. Do not change the marker position. Refer to Figure 5-69 for typical display.
 87. Turn function generator LINE power ON.
 88. Adjust A6A10 YTX Linearity Correction adjustment LR2 (A6A10R34) to minimize peak-to-peak amplitude of signal trace between marker position to approximately 3 divisions past marker position. Ignore high-frequency end of trace temporarily.
 89. Adjust marker position to point on trace where response begins to go bad.
 90. Turn function generator LINE power OFF.
 91. Adjust A6A10 YTX Linearity Correction adjustment LB3 (A6A10R42) in a clockwise direction to place roll-off point at marker position.
 92. Turn function generator LINE power ON.
 93. Adjust A6A10 YTX Linearity Correction adjustment LR3 (A6A10R37) to minimize peak-to-peak amplitude of signal trace between marker position and 18.6 GHz.
 94. Turn function generator LINE power OFF.
 95. Key in SCALE LOG 2 dB. Adjust to place trace on curve plotted in Step 73.
 96. Adjust A6A10 YTX Bias adjustment VD (A6A10R12) for maximum amplitude.
 97. Adjust A6A11 Band D Segment adjustments D1 (A6A11R57) and D2 (A6A11R75) for best alignment of signal trace to curve plotted in Step 73. D1 controls the low-frequency end of the trace and D2 controls the high-frequency end.
 98. Key in -13 dBm, SCALE LOG 1 dB.
 99. Adjust A6A10 Band D IF Step Gain adjustment GD (A6A10R27) to align the signal trace as closely as possible to the curve plotted in Step 73. Counterclockwise rotation of GD moves trace up.
 100. Turn function generator LINE power ON. Press TRACE A . Total deviation of signal trace from the curve plotted in Step 73 should be less than 4.4 dB. When met, remove curve plotted on CRT and press TRACE A .
-

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

18.6 to 22 GHz

101. Disconnect spectrum analyzer from output of 86290B RF Plug-In and connect power meter/thermistor mount with K-Band waveguide adapter to output of 86290B RF Plug-In through same cable assembly used in previous procedures.
102. Set 8620C Sweep Oscillator for an 18.6 GHz CW output.
103. Key in START FREQ 18.6 GHz, STOP FREQ 22 GHz, SCALE LOG ENTER dB/DIV 2 dB, REFERENCE LEVEL -13 dBm.
104. Note power meter indication for 18.6 GHz output frequency. Any difference between this indication and that noted in Step 73 is due to the different thermistor mount and K-Band adapter and must be compensated for.

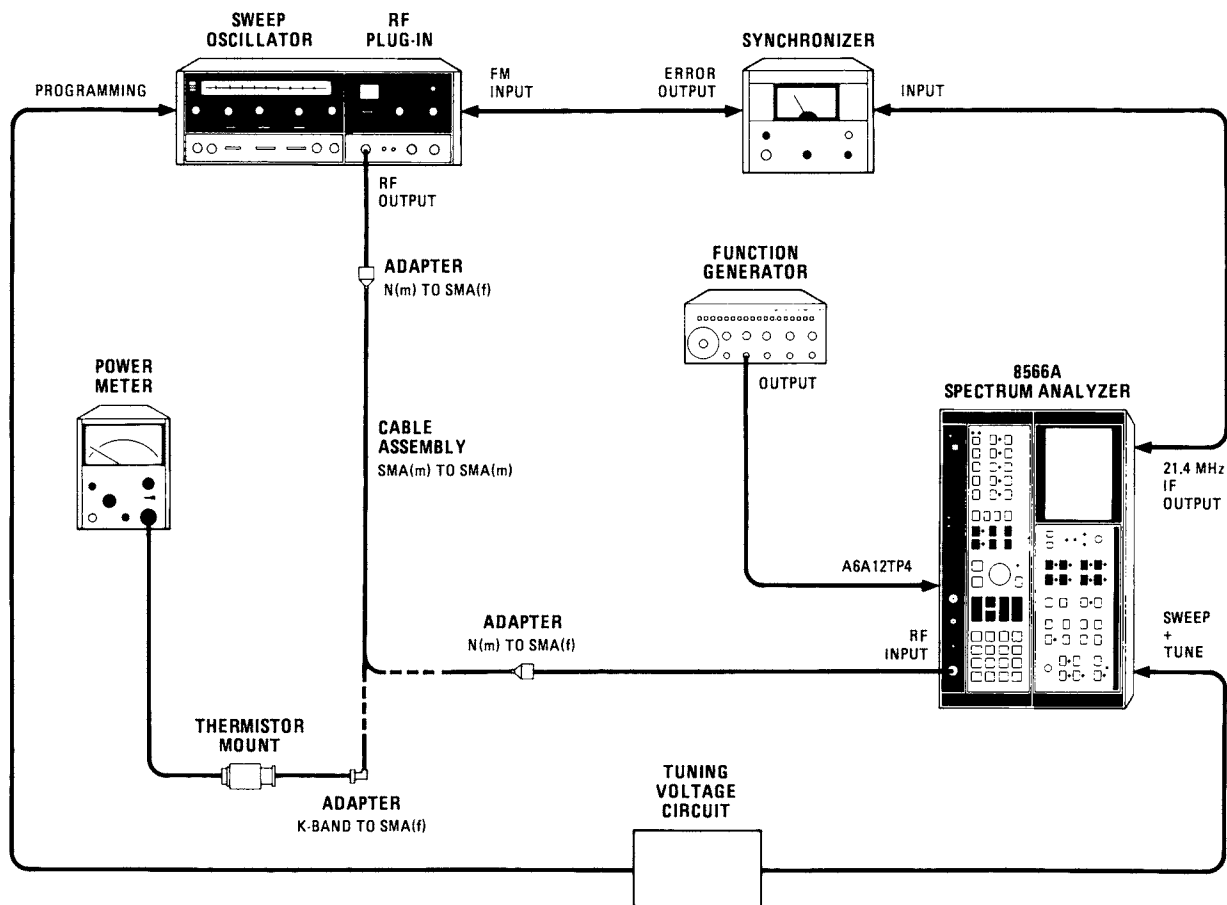


Figure 5-70. Frequency Response Adjustments Setup (18.6–22 GHz)

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

105. Measure power out of 86290B RF Plug-In every 200 MHz between 18.6 and 22 GHz and plot power meter indication, plus difference noted in Step 104, at corresponding location on 8566A CRT. (This location may be discerned by using the MARKER function to place a marker at the frequency being plotted.)
106. Disconnect power meter/thermistor mount and connect equipment as shown in Figure 5-70 with RF Plug-In connected to 8566A using same cable used to connect power meter.
107. Set 8620C Sweep Oscillator to Full Sweep (2-22 GHz).
108. Adjust special Tuning Voltage Circuit GAIN and OFFSET to lock 8709A between 18.6 and 22 GHz.
109. Key in SCALE LOG 5 dB. Press pushbutton and adjust to place signal trace on curve plotted in Step 105.
110. Turn function generator LINE power ON and adjust for 18 volt peak-to-peak 20 Hz output.
111. Adjust A6A12 Band E IF Offset A6A12R82 for minimum peak-to-peak deviation of signal trace at 18.6 GHz. Adjust as necessary to keep signal in upper half of display.
112. Press MARKER and adjust marker to position where frequency response begins to go bad as indicated by increase in peak-to-peak deviation of trace.
113. Turn function generator LINE power OFF.
114. Adjust A6A10 YTX Linearity Correction adjustment LB4 (A6A10R70) to position roll-off point at marker position.
115. Turn function generator LINE power ON.
116. Adjust A6A10 YTX Linearity Correction adjustment LR4 (A6A10R76) for minimum peak-to-peak deviation of signal trace from marker position to 22 GHz.
117. Key in SCALE LOG 2 dB. Press pushbutton and adjust to keep signal trace on curve plotted in Step 105.
118. Turn function generator LINE power OFF.
119. Adjust A6A10 YTX Bias adjustment VE (A6A10R9) for best amplitude.

ADJUSTMENTS

5-35. FREQUENCY RESPONSE ADJUSTMENTS (Cont'd)

120. Adjust A6A11 Band E Segment adjustments E1 (A6A11R60) and E2 (A6A10R78) to match trace as closely as possible to the power level curve plotted on CRT in Step 105. E1 controls the low-frequency end of the trace and E2 controls the high-frequency end. Ignore absolute power level at this time. The **REFERENCE LEVEL** may be adjusted as necessary to keep trace aligned with curve plotted on CRT.
121. Key in **REFERENCE LEVEL** - 13 dBm. Adjust A6A10 Band E IF Step Gain adjustment GE (A6A10R29) to match trace to absolute power levels plotted on CRT in Step 105.
122. Turn function generator LINE power ON. Press TRACE A **MAX HOLD**. Total deviation from the power level curve plotted on the CRT should be less than 4.4 dB for 18.6 to 20 GHz and less than 6.0 dB for 20 to 22 GHz. When met, remove curve plotted on CRT and press TRACE A **CLEAR-WRITE**.
123. Key in **START FREQ** 12.5 GHz, **STOP FREQ** 18.6 GHz, SCALE LOG **ENTER EN/DIV** 5 dB, **VIDEO BW** 100 kHz, **SWEEP TIME** 1 sec. Press **REFERENCE LEVEL** and adjust DATA knob to place signal trace in upper half of display.
124. Set function generator for 18 volt peak-to-peak output.
125. Adjust A6A12 Band D IF Offset A6A12R83 for minimum peak-to-peak deviation of trace between 12.5 and 18.6 GHz.
126. Change function generator output frequency to 150 Hz.
127. Change 8566A SWEEP TIME to **AUTO**.
128. Adjust A6A12 Delay Compensation adjustments D2 (A6A12R25) and D3 (A6A12R24) for minimum peak-to-peak deviation of trace between 12.5 and 18.6 GHz. D2 and D3 interact. Therefore, it may be necessary to perform adjustments more than once to ensure best flatness.
129. Key in **START FREQ** 2 GHz, **STOP FREQ** 5.8 GHz. Set 8709A ERROR SIGNAL switch to minus (-).
130. Set function generator output for 15V peak-to-peak signal at 200 Hz.
131. Adjust A6A12 Delay Compensation adjustment D1 (A6A12R26) for minimum peak-to-peak deviation of trace between 2 and 5.8 GHz.
132. Disconnect all test cables (including Tuning Voltage Circuit power supply leads) from the spectrum analyzer and replace cover over A6 RF Module. Remove jumper between A12TP2 and A12TP3 (Lock Indicator Disable).
-

ADJUSTMENTS

5-36. ANALOG-TO DIGITAL CONVERTER ADJUSTMENTS

REFERENCE:

A3A8 Analog-Digital Converter

DESCRIPTION:

The Analog-to-Digital converter is adjusted at zero and full scale by injecting a $+0.020$ Vdc input and a $+10.00$ Vdc input and adjusting the ZERO and FS controls until ramp output at A3A8TP5 oscillates between 0 Vdc and $+5$ Vdc. This sets the end points for the CRT trace display; when the sweep ramp input is at $+0.020$ Vdc, the left edge of the graticule, trace position one, is set and when the sweep ramp input is at $+10.00$ Vdc, the right edge of the graticule, trace position 1000, is set.

This procedure requires $+0.020$ Vdc and $+10.00$ Vdc which are stable and noise-free. A simple supply circuit is illustrated in Figure 5-78 which can be built with common components. If these components are unavailable, an alternate procedure is provided.

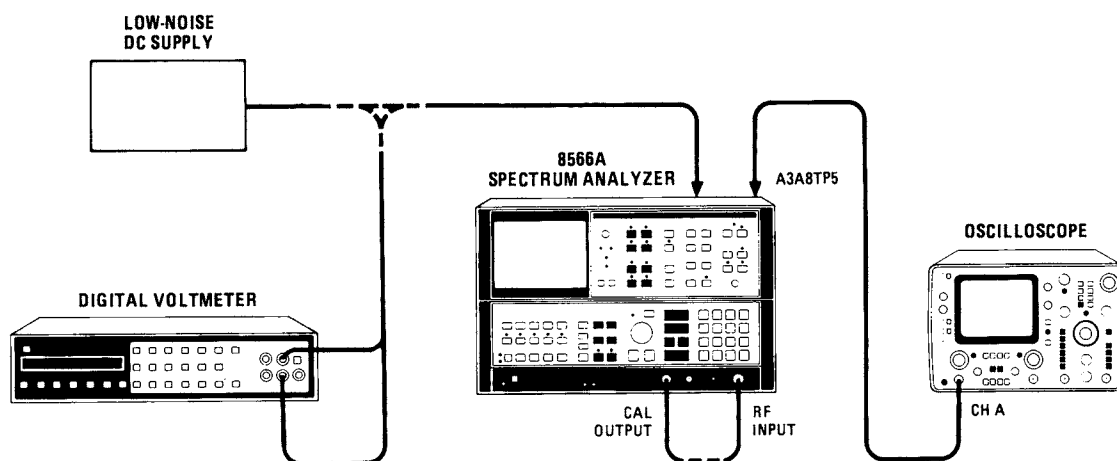


Figure 5-71. Analog-to-Digital Converter Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM)	HP 3455A
Oscilloscope	HP 1741A
Low-Noise DC Supply (Optional)	Refer to Figure 5-78

5-36. ANALOG-TO DIGITAL CONVERTER ADJUSTMENTS (Cont'd)

PROCEDURE:

1. Position instrument upright as shown in Figure 5-71. and remove top cover. Install A3A8 Analog-to-Digital Converter on extender.
2. Set LINE switch to ON and press 2-22
GHz.
3. Procedure without using Low-Noise DC Supply.
 - a. Key in SWEEP
TIME 1 second, MARKER NORMAL.
 - b. Connect DVM to A3A8TP1. Connect ground lead to A3A8TP4.
 - c. Using the step key, place marker on the first division graticule line from the left edge of the graticule. Do not use the DATA knob, only the step key.
 - d. Key in SHIFT SINGLE. Note DVM indication when sweep ends. Voltage begins to drift immediately after sweep ends, therefore the first indication after the sweep ends is the only valid indication. It may be helpful to key in SHIFT SINGLE several times to be sure of valid indication at end of sweep.
 - e. If DVM indication is $+1.000 \text{ Vdc} \pm 0.005 \text{ Vdc}$ at end of sweep, no adjustment is necessary. Skip to step 3-f. If DVM indication is greater than $+1.005 \text{ Vdc}$, adjust A3A8R14 ZERO slightly clockwise and go back to step 3-d. If DVM indication is less than $+0.995 \text{ Vdc}$, adjust A3A8R14 ZERO slightly counterclockwise and go back to step 3-d. Refer to Figure 5-72 for location of adjustment.
 - f. Key in MARKER NORMAL. Using the step key (do not use DATA knob), place marker on the right edge of the graticule.
 - g. Key in SHIFT SINGLE.
 - h. If DVM indication is $+10.000 \text{ Vdc} \pm 0.005 \text{ Vdc}$ at the end of the sweep, no further adjustment is necessary. If DVM indication is greater than $+10.005 \text{ Vdc}$, adjust A3A8R9 FS slightly clockwise. Go back to step 3-g. If DVM indication is less than $+9.995 \text{ Vdc}$, adjust A3A8R9 FS slightly counterclockwise. Go back to step 3-g. Refer to Figure 5-72 for location of adjustment.

5-36. ANALOG-TO DIGITAL CONVERTER ADJUSTMENTS (Cont'd)

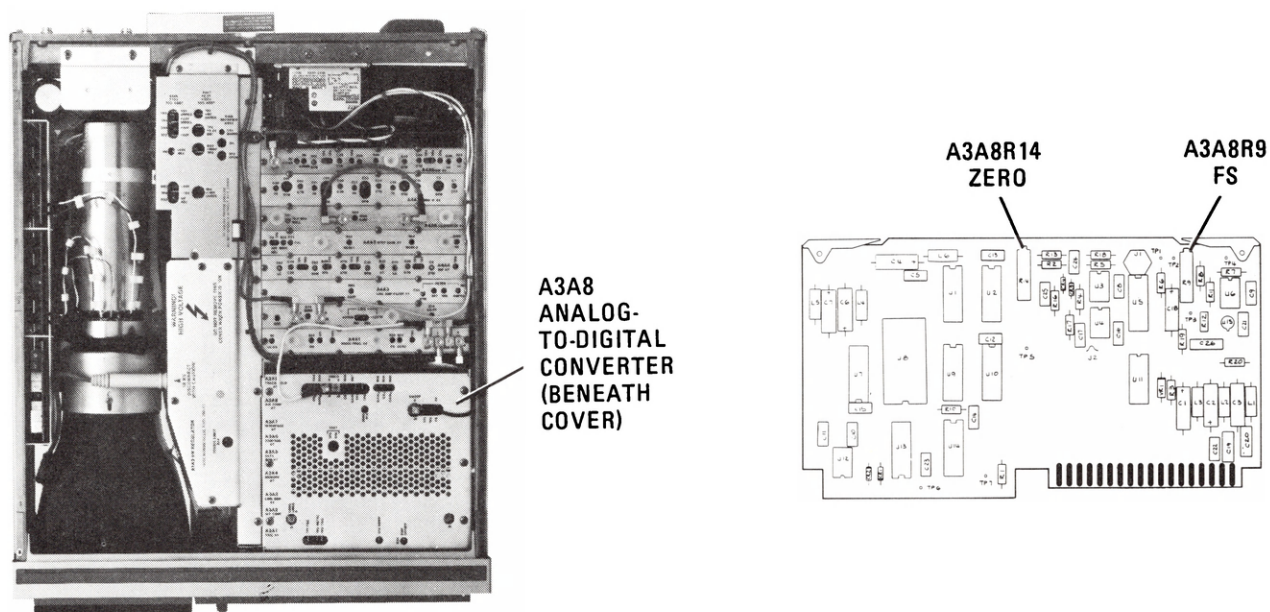


Figure 5-72. Location of Analog-to-Digital Converter Adjustments

4. Procedure using Low-Noise DC Supply illustrated in Figure 5-78.
 - a. Key in MARKER . Adjust marker to left edge of graticule.
 - b. Key in .
 - c. Remove cable from A3A8 Sweep Ramp input A3A8J1.
 - d. Connect DVM to output of Low-Noise DC Supply. Connect Low-Noise DC Supply power leads to A1A6TP2 (+15 Vdc) and A1A6TP4 (−15 Vdc).
 - e. Adjust output voltage of Low-Noise DC supply for DVM indication of $+0.020 \text{ Vdc} \pm 0.001 \text{ Vdc}$.
 - f. Disconnect DVM from Low-Noise DC Supply.
 - g. Connect output of Low-Noise DC Supply to A3A8J1 Sweep Ramp input using a BNC to SMB snap-on cable (part of Service Accessories).

5-36. ANALOG-TO DIGITAL CONVERTER ADJUSTMENTS (Cont'd)

- h. Connect oscilloscope to A3A8TP5.
- i. Adjust A3A8R14 ZERO until dc level at A3A8TP5 oscillates between 0 Vdc and +5 Vdc as indicated on oscilloscope. Refer to Figure 5-72 for location of adjustment.
- j. Press MARKER pushbutton and adjust marker to right edge of graticule.
- k. Disconnect Low-Noise DC Supply from A3A8J1 and connect to DVM. Adjust output voltage for DVM indication of +10.000 Vdc \pm 0.001 Vdc.
- l. Key in . Connect output of Low-Noise DC Supply to A3A8 TP1.
- m. Adjust A3A8R9 FS until dc level at A32A8TP5 oscillates between 0 Vdc and +5 Vdc as indicated on oscilloscope. Refer to Figure 5-72 for location of adjustment.

5-37. TRACK AND HOLD ADJUSTMENTS

REFERENCE:

A3A9 Track and Hold

DESCRIPTION:

The CAL OUTPUT signal is connected to the RF INPUT. The instrument is placed in zero frequency span to produce a dc level output from the IF-Video section and this dc level is regulated by adjusting the reference level. The Offsets and Gains on the Track and Hold assembly are adjusted for proper levels using a DVM.

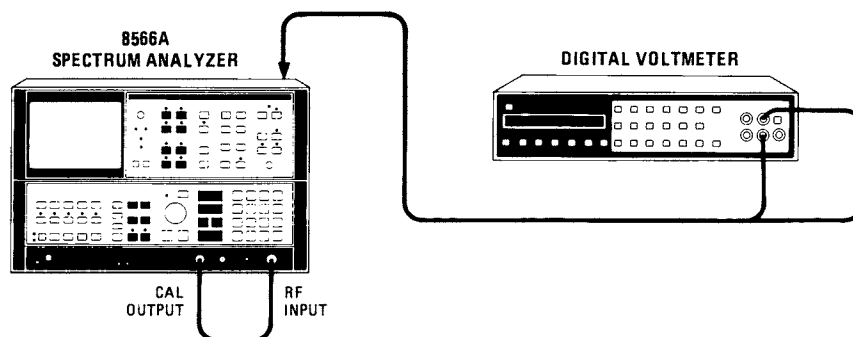


Figure 5-73. Track and Hold Adjustments Setup

ADJUSTMENTS

5-37. TRACK AND HOLD ADJUSTMENTS (Cont'd)

EQUIPMENT:

Digital Voltmeter (DVM) HP 3455A

PROCEDURE:

1. Place instrument upright as shown in Figure 5-73 with top cover removed. Install A3A9 Track and Hold on extender.
2. Set LINE switch to ON and press .
3. Connect CAL OUTPUT to RF INPUT.
4. Connect DVM to A3A9TP3. Connect ground lead to A3A9TP1.
5. Key in 100 MHz, 0 Hz.
6. Disconnect 9 (white) cable from A4A1J1.
7. Short A3A9TP1 to A3A9TP3. DVM indication should be 0.000 Vdc \pm 0.001 Vdc.
8. Key in , TRACE A , MARKER , MARKER , SWEEP , TRACE A .
9. Adjust A3A9R59 OS until Marker Δ level indication as indicated by CRT annotation flickers back and forth between .00 and .10 dB. Refer to Figure 5-74 for location of adjustment.
10. Key in TRACE A .
11. Adjust A3A9R44 OSP until Marker Δ level indication as indicated by CRT annotation flickers back and forth between .00 and .10 dB. Refer to Figure 5-74 for location of adjustment.
12. Key in TRACE A .
13. Adjust A3A9R36 OSN until Marker Δ level indication as indicated by CRT annotation flickers back and forth between .00 and .10 dB. Refer to Figure 5-74 for location of adjustment.
14. Key in LOG , TRACE A .
15. Remove short from between A3A9TP1 and A3A9TP3. Reconnect 9 (white) cable to A4A1J1.
16. Press pushbutton and adjust DATA knob for DVM indication of +2.000 Vdc \pm 0.001 Vdc at A3A9TP3.

ADJUSTMENTS

5-37. TRACK AND HOLD ADJUSTMENTS (Cont'd)

17. Connect DVM to A3A9TP8.
18. Key in **SINGLE** .
19. Adjust A3A9R39 GP for DVM indication of $+0.980 \text{ Vdc} \pm 0.001 \text{ Vdc}$. Refer to Figure 5-74 for location of adjustment.
20. Disconnect DVM from instrument.
21. Key in **CONT** .
22. Adjust A3A9R57 G for Marker Δ level indication as indicated by CRT annotation of $100 \text{ dB} \pm 0.1 \text{ dB}$. Refer to Figure 5-74 for location of adjustment.
23. Key in **SHIFT** **TRACE A** **BLANK** .

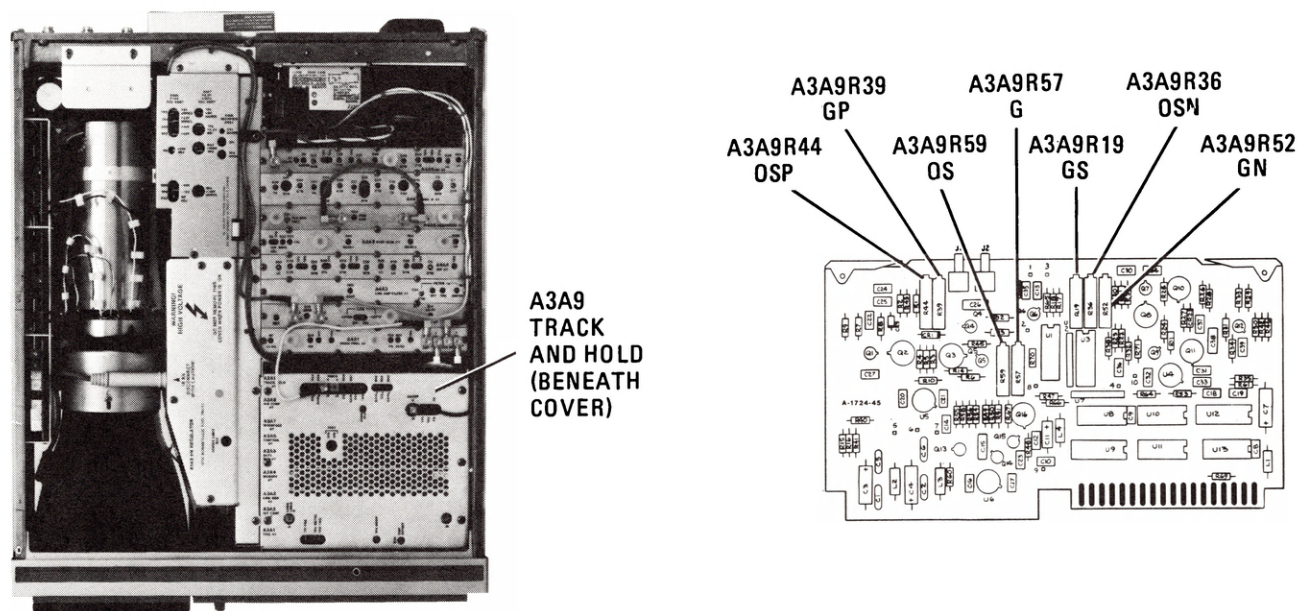


Figure 5-74. Location of Track and Hold Adjustments

ADJUSTMENTS

5-37. TRACK AND HOLD ADJUSTMENTS (Cont'd)

24. Adjust A3A9R19 GS for Marker Δ level indication as indicated by CRT annotation of 100 dB ± 0.1 dB. Refer to Figure 5-74 for location of adjustment.
 25. Key in TRACE A .
 26. Adjust A3A9R52 GN for Marker Δ level indication as indicated by CRT annotation of 100 dB ± 0.1 dB. Refer to Figure 5-74 for location of adjustment.
 27. Set LINE switch to OFF.
 28. Install A3A9 Track and Hold in instrument without extender.
-

5-38. DIGITAL STORAGE DISPLAY ADJUSTMENTS

REFERENCE:

A3A1 Trigger
A3A2 Intensity Control
A3A3 Line Generator

DESCRIPTION:

First, preliminary graticule adjustments are performed to place the graticule on the CRT. These preliminary adjustments assume that repair has been performed on the associated circuitry. If no repair has been performed on the PC boards listed under REFERENCE, the preliminary adjustments are not necessary.

Next, the Sample and Hold Balance adjustments are performed. The horizontal and vertical Offset and Gain adjustments are performed, then the final graticule adjustments are performed.

Last, The CRT annotation adjustments are performed to place the CRT annotation in proper location with respect to the graticule.

5-38. DIGITAL STORAGE DISPLAY ADJUSTMENTS (Cont'd)

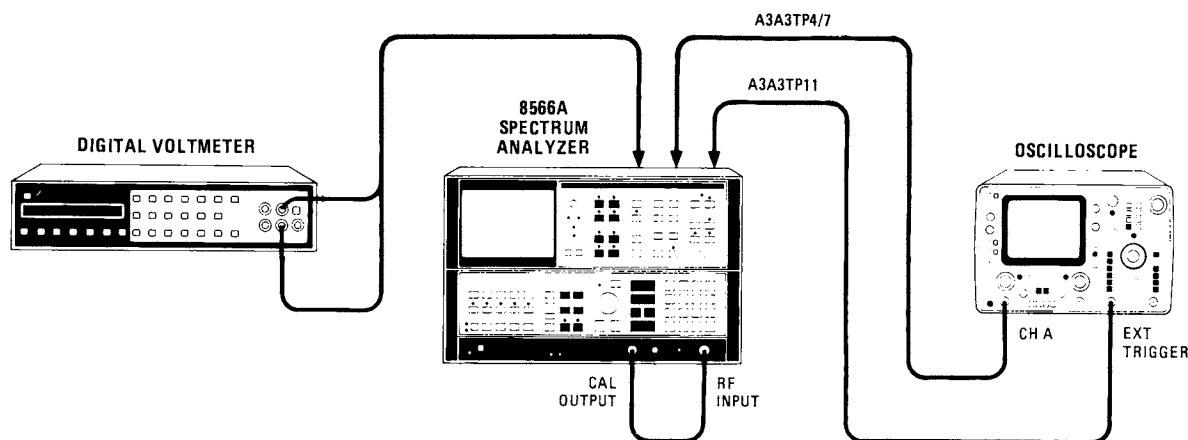


Figure 5-75. Digital Storage Display Adjustments Setup

EQUIPMENT:

Digital Voltmeter (DVM)	HP 1741A
Oscilloscope	HP1741A

PROCEDURE:

1. Place instrument upright as shown in Figure 5-75 with top cover removed.

2. Set LINE switch to ON and press 2-22
GHz.

Preliminary Graticule Adjustments

3. Press TRACE A BLANK.

4. Adjust A3A3R4 X GAIN and A3A3R5 Y GAIN to place graticule information completely on CRT. Refer to Figure 5-76 for location of adjustment.

5. Adjust A3A2R12 LL THRESHOLD fully clockwise. Refer to Figure 5-76 for location of adjustment.



6. Adjust A3A3R6 XLL so that horizontal graticule lines just meet the vertical graticule lines at the left and right of the graticule. Refer to Figure 5-76 for location of adjustment.

7. Adjust A3A3R9 XLL so that horizontal graticule lines just meet the vertical graticule lines at the left and right of the graticule. Refer to Figure 5-76 for location of adjustment.

5-38. DIGITAL STORAGE DISPLAY ADJUSTMENTS (Cont'd)

8. Repeat Steps 6 and 7 until horizontal and vertical graticule lines are adjusted so that they meet the graticule lines at the edges of the graticule but do not overshoot.
9. Adjust A3A2R12 LL THRESHOLD fully counterclockwise. Refer to Figure 5-76 for location of adjustment.
10. Adjust A3A3R7 XSL so that horizontal graticule lines just meet the vertical graticule lines at the left and right side of the graticule. Refer to Figure 5-76 for location of adjustment.
11. Adjust A3A3R8 YSL so that the vertical graticule lines just meet the horizontal graticule lines at the top and bottom of the graticule. Refer to Figure 5-76 for location of adjustment.
12. Repeat Steps 10 and 11 until horizontal and vertical graticule lines are adjusted so that they meet the graticule lines at the edges of the graticule but do not overshoot.

Sample and Hold Balance Adjustments

13. Set LINE switch to OFF.
14. Place A3A3 Line Generator on extender boards.
15. Set LINE switch to ON. Press .
16. Key in  RECORDER LOWER LEFT 0 Hz, RECORDER UPPER RIGHT 1028 Hz.
17. Connect oscilloscope to A3A3TP4.
18. Connect A3A3TP11 to oscilloscope External Trigger Input and adjust oscilloscope controls for display as shown in Figure 5-77.
19. Adjust A3A2R50 X S&H BAL for minimum dc offset level between V_A and V_B as illustrated in Figure 5-77. Refer to Figure 5-76 for location of adjustment.
20. Connect oscilloscope to A3A3TP7.
21. Adjust A3A2R51 Y S&H BAL for minimum dc offset level between V_A and V_B as illustrated in Figure 5-77. Refer to Figure 5-76 for location of adjustment.

ADJUSTMENTS

5-38. DIGITAL STORAGE DISPLAY ADJUSTMENTS (Cont'd)

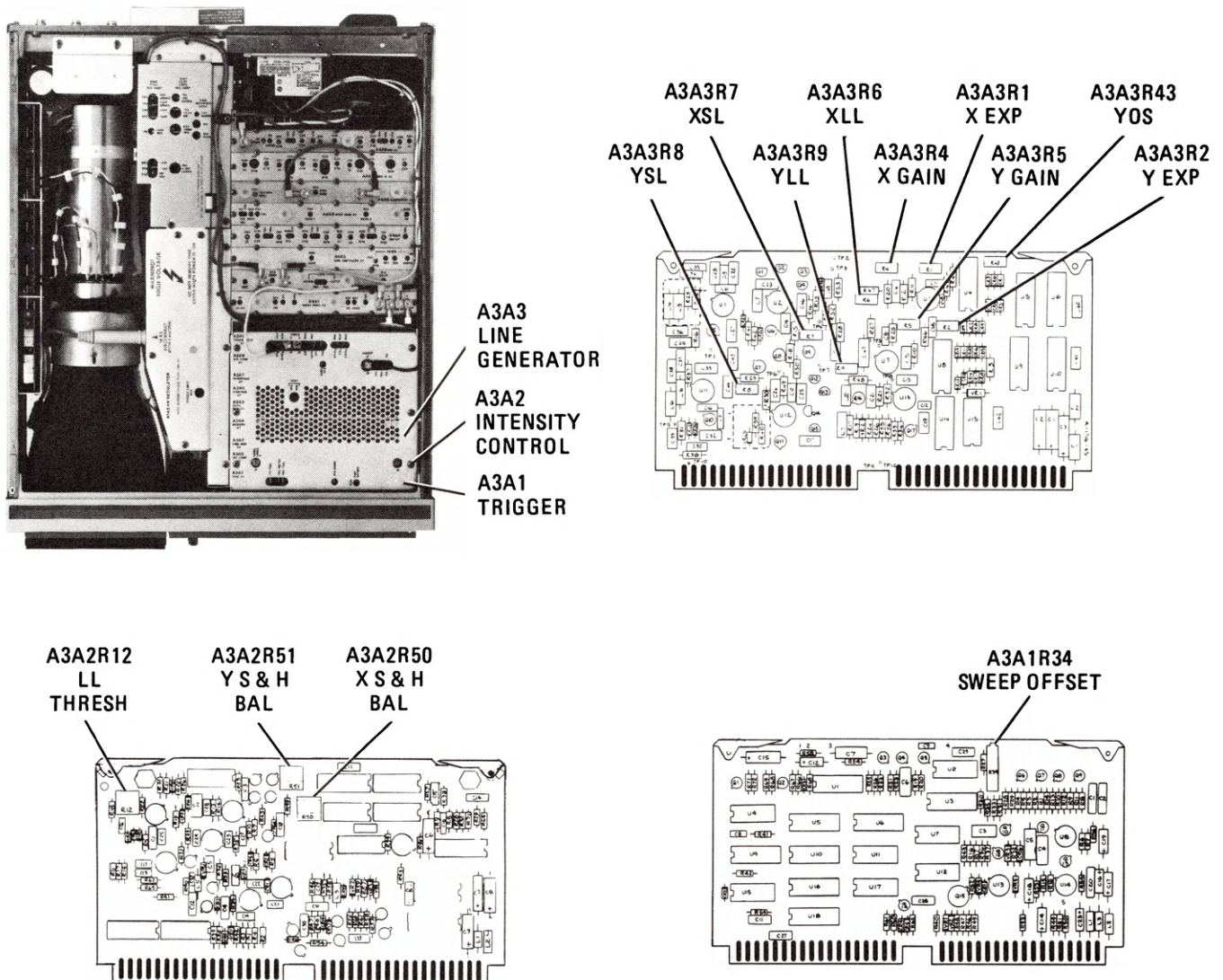


Figure 5-76. Location of Digital Storage Display Adjustments

22. Set LINE switch to OFF.
23. Install A3A3 Line Generator in instrument without extender boards.
24. Set LINE switch to ON.

5-38. DIGITAL STORAGE DISPLAY ADJUSTMENTS (Cont'd)

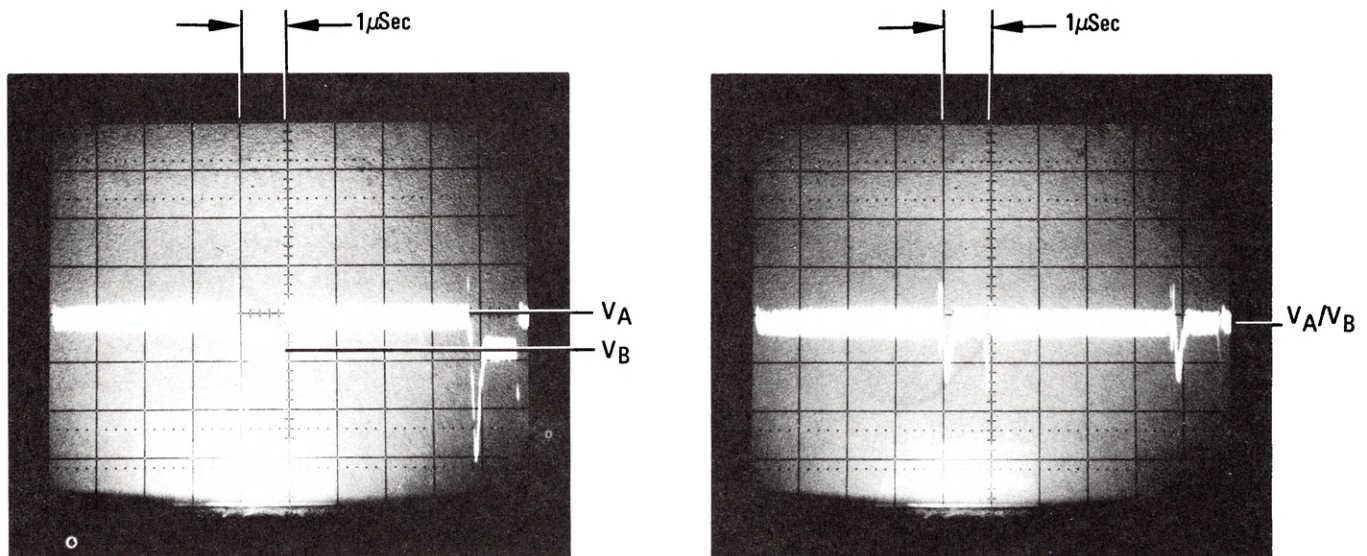





Figure 5-77. Sample and Hold Balance Adjustment Waveforms

X and Y Offset and Gain Adjustments



25. Press 2-22
GHz.
26. Key in FREQUENCY
SPAN 0 Hz, SWEEP
TIME 100 μSec.
27. Disconnect cable from A3A9J2 and connect to LG/FS test connector on A3A2 Intensity Control; other end of cable remains connected to A3A2J1.
28. Select VIDEO TRIGGER and adjust LEVEL for a stable display on CRT.
29. Adjust A3A1R34 SWEEP OFFSET so that signal trace begins at left edge graticule line. Refer to Figure 5-76 for location of adjustment.
30. Adjust A3A3R4 X GAIN for twenty cycles on the graticule. This may be made easier by adjusting A3A1 SWEEP OFFSET so that first peak is centered on left edge graticule line then adjusting A3A3 X GAIN for two cycles per division with the twentieth cycle being centered on the right edge graticule line. A3A1 SWEEP OFFSET must then be readjusted so that trace begins at left edge graticule line. Refer to Figure 5-76 for location of adjustment.

ADJUSTMENTS

5-38. DIGITAL STORAGE DISPLAY ADJUSTMENTS (Cont'd)

31. Remove cable from A3A2 LG/FS test connector and reconnect to A3A9J2.
32. Make sure there is no signal input at the RF INPUT connector.
33. Connect DVM to A3A9TP3.
34. Press LIN pushbutton.
35. DVM indication should be 0.000 Vdc. ± 0.002 Vdc.
36. Adjust A3A3R43 YOS to align the bottom graticule line with the fast sweep signal line. Refer to Figure 5-76 for location of adjustment.
37. Key in  100 MHz. Connect CAL OUTPUT to RF INPUT. Press LOG  10 dB.
38. Press  pushbutton and adjust DATA knob for DVM indication of +2.000 Vdc ± 0.002 Vdc.
39. Adjust A3A3R5 Y GAIN to align the top graticule line with the fast sweep signal line. Refer to Figure 5-76 for location of adjustment.

Final Graticule Adjustments

40. Press  , TRACE A  .
41. Set A3A2 LL THRESHOLD A3A2R12 fully clockwise.
42. Adjust A3A3R6 XLL and A3A3R9 YLL to align horizontal and vertical graticule lines so that each line meets the edge line (right, left, top, or bottom) but does not overshoot.
43. Adjust A3A2R12 LL THRESHOLD fully counterclockwise.
44. Adjust A3A3R7 XSL and A3A3R8 YSL to align horizontal and vertical graticule lines so that each line meets the edge line (right, left, top, or bottom) but does not overshoot.
45. Adjust A3A2R12 LL THRESHOLD clockwise until all graticule lines switch over to long lines. This is indicated by a noticeable increase in intensity. All graticule lines should increase in intensity.

X and Y Expand Adjustments

46. Press  .
47. Key in MARKER  .

ADJUSTMENTS

5-38. DIGITAL STORAGE DISPLAY ADJUSTMENTS (Cont'd)

48. Adjust A3A3R1 X EXP to center the letter F in REF (CRT annotation in upper left corner of display) over the left edge graticule line. Refer to Figure 5-76 for location of adjustment.
49. Adjust A3A3R2 Y EXP to align the remainder of the CRT annotation so that the upper annotation (Marker data) is above the top graticule line and the lower annotation (Start and Stop data) is below the bottom graticule line. Adjust for equal spacing above and below graticule. Refer to Figure 5-76 for location of adjustment.

Resealing of Adjustments

50. If any of the following adjustments were adjusted in the preceding steps, they must be resealed. They should be sealed with a silicone rubber compound without acetic acid; HP Part Number 0470-0357.

X GAIN A3A3R4
Y GAIN A3A3R5
XLL A3A3R6
YLL A3A3R9
XSL A3A3R7
YSL A3A3R8

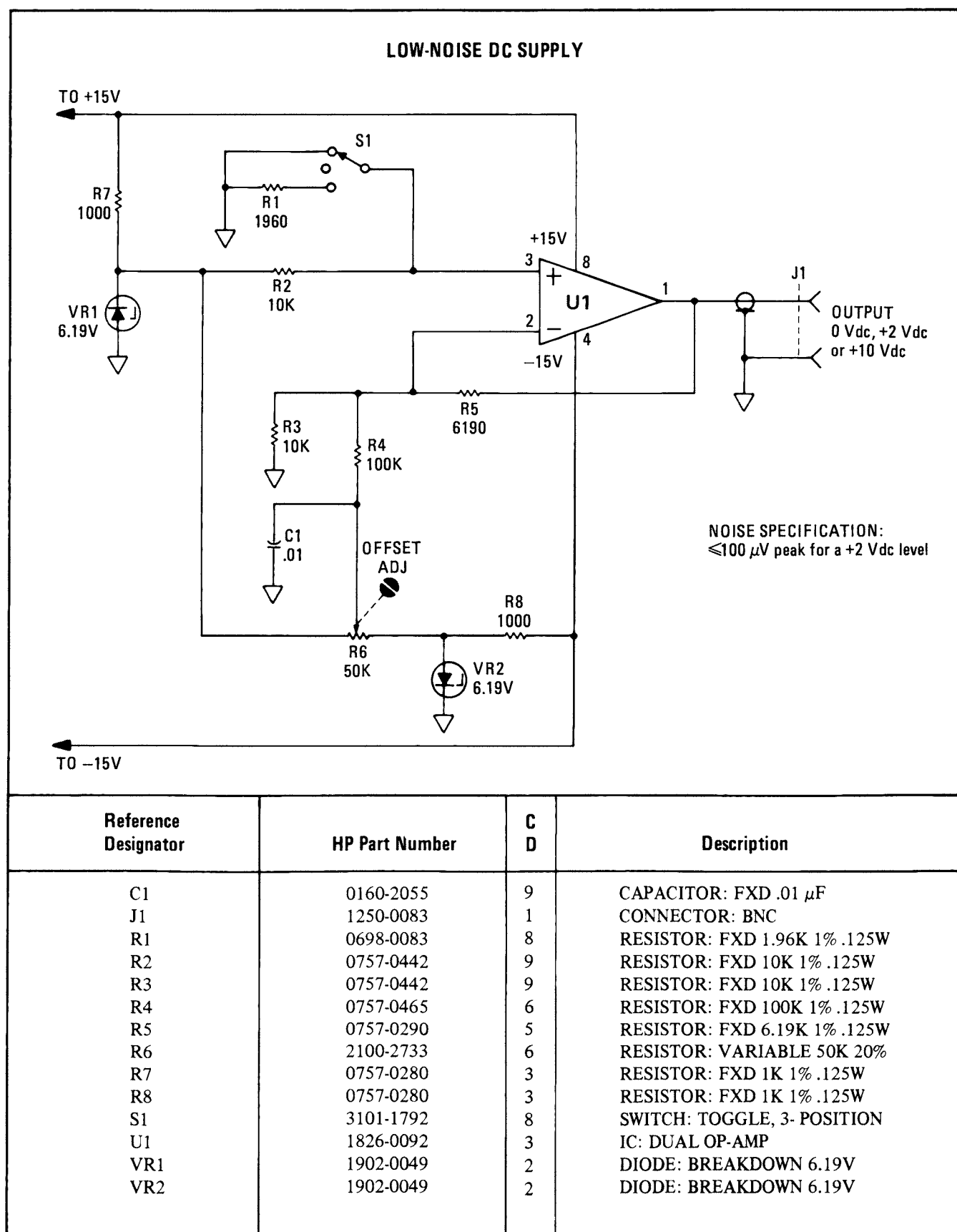
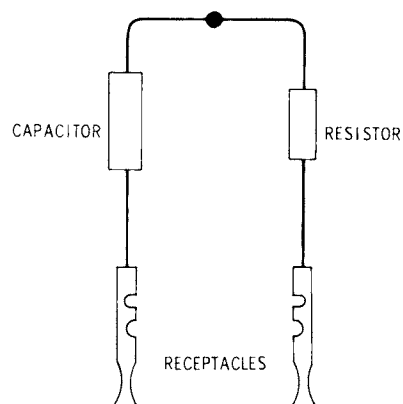


Figure 5-78. Low-Noise DC Supply

CRYSTAL FILTER BYPASS NETWORK CONFIGURATION



A4A4 Bandwidth Filter and A4A8 Attenuator--Bandwidth Filter
21.4 MHz IF Crystal Filter Bypass Networks (4 required)

Part	Value	HP Part Number	CD	Quantity
Resistor	31.6 Ω	0757-0180	2	4
Capacitor	91 pF	0160-2203	9	4
Receptacle	—	1251-3720	1	8

A4A7 3 MHz Bandwidth Filter
3 MHz IF Crystal Filter Bypass Networks (4 required)

Part	Value	HP Part Number	CD	Quantity
Resistor	2.7 Ω	0811-1671	4	4
Capacitor	.047 μ F	0170-0040	9	4
Receptacle	—	1251-3720	1	8

Figure 5-79. Crystal Filter Bypass Network Configuration

TUNING VOLTAGE CIRCUIT

DESCRIPTION

The special Tuning Voltage Circuit is used to externally sweep the HP 8620C Sweep Oscillator in order to phase-lock the oscillator's output to the HP 8566A tuning range using the HP 8709A Synchronizer.

The SWEEP + TUNE OUT voltage (-1V/GHz) of the analyzer is used by the Tuning Voltage Circuit to generate the necessary tuning voltage to sweep the sweep oscillator.

Range and RF Plug-In selection is provided so that the Tuning Voltage Circuit will operate for Low-Band (100 Hz to 2.5 GHz) or High-Band (2 to 22 GHz) and also for Standard (2 to 18.6 GHz) RF Plug-Ins or Option H08 (2 to 22 GHz) RF Plug-Ins.

Certain sweep oscillator control settings are required for proper operation of the Tuning Voltage Circuit. These settings are as follows:

8620C:
 BAND 4
 SWEEP MODE EXT
 MARKERS OFF

86222/86290
 FM/NORM/PL (rear panel) PL

PARTS LIST

Reference Designator	HP Part Number	C D	Description
C1	0180-2208	6	CAPACITOR-FXD 220UF $\pm 10\%$ 10VDC TANTALUM
C2	0160-0127	2	CAPACITOR-FXD 1UF $\pm 20\%$ 25VDC CERAMIC
C3	0160-0127	2	CAPACITOR-FXD 1UF $\pm 20\%$ 25VDC CERAMIC
C4	0160-0163	6	CAPACITOR-FXD .033UF $\pm 10\%$ 200VDC POLYETHYLENE
J1	1250-0083	1	CONNECTOR-RF BNC FEMALE 50-OHM
J2	1251-0101	6	CONNECTOR-50-PIN MICRORIBBON FEMALE
P1	1251-0086	6	CONNECTOR-50-PIN MICRORIBBON MALE
P2	1251-0086	6	CONNECTOR-50-PIN MICRORIBBON MALE
R1	2100-2730	3	RESISTOR-VARIABLE CONTROL 1-TRN 5K 20%
R2	2100-2730	3	RESISTOR-VARIABLE CONTROL 1-TRN 5K 20%
R3	0757-0278	9	RESISTOR-1.78K 1% .125W F TC=0 \pm 100
R4	0757-0460	1	RESISTOR-61.9K 1% .125W F TC=0 \pm 100
R5	0698-3136	8	RESISTOR-17.8K 1% .125W F TC=0 \pm 100
R6	0757-0401	0	RESISTOR-100 1% .125W F TC=0 \pm 100
R7	0757-0401	0	RESISTOR-100 1% .125W F TC=0 \pm 100
R8	0698-3156	2	RESISTOR-14.7K 1% .125W F TC=0 \pm 100
R9	0757-0442	9	RESISTOR-10K 1% .125W F TC=0 \pm 100
R10	0698-3266	5	RESISTOR-237K 1% .125W F TC=0 \pm 100
R11	0757-0462	3	RESISTOR-75K 1% .125W F TC=0 \pm 100
S1	3101-0957	5	SWITCH-TOGGLE SUBMINIATURE DPDT 5A 115VAC
S2	3101-0957	5	SWITCH-TOGGLE SUBMINIATURE DPDT 5A 115VAC
U1	1826-0371	1	IC OP AMP TO-99 LF256H
VR1	1902-0049	2	DIODE-ZNR 6.19V 5% DO-7 PD=.4W TC=+.22%

Figure 5-80. Tuning Voltage Circuit (1 of 2)

TUNING VOLTAGE CIRCUIT

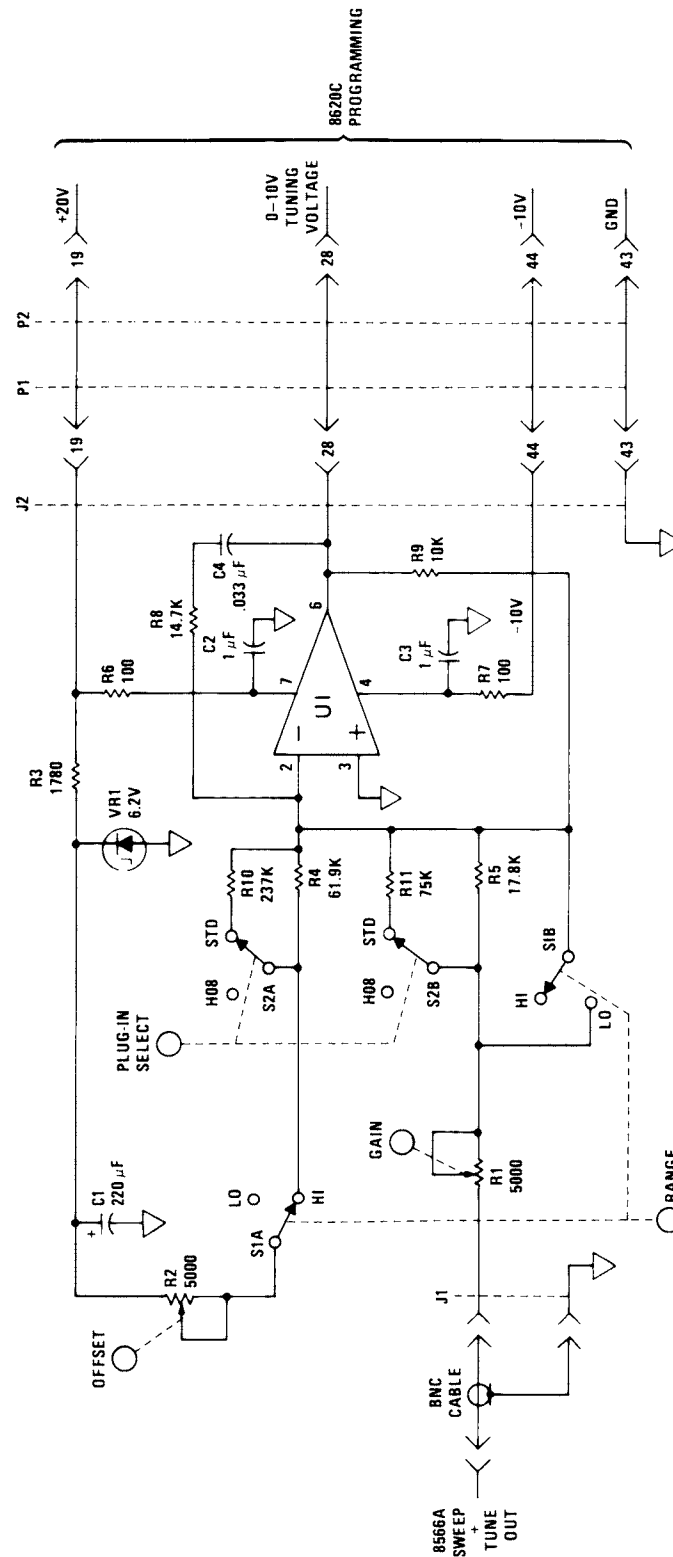


Figure 5-80. Tuning Voltage Circuit (2 of 2)

SECTION VI REPLACEABLE PARTS

6-1. INTRODUCTION

6-2. This section contains information for ordering replacement parts. Table 6-1 lists abbreviations used in the parts list. Tables 6-3, 6-4, and 6-5 list electrical and mechanical parts in reference designator order. Table 6-2 is a list of names and addresses that correspond to the manufacturer's code numbers used in Tables 6-3 through 6-5. Figures 6-1 through 6-11 contain illustrations and parts listings for mechanical parts found in the instrument.

6-3. HOW TO DETERMINE A REPLACEMENT PART NUMBER

6-4. Electrical Parts. It is necessary to determine the reference designator of an electrical part before the replacement part number can be determined. Reference designators for major assemblies and components can be found on the major assembly and component location illustrations at the rear of this volume. Reference designators for assembly mounted components can be found on the schematic diagrams for those assemblies. Replacement part numbers for these parts are found in Table 6-3 in alphanumerical order. Reference designators for some chassis-mounted electrical parts can be found on primary power wiring diagrams. For the RF Section, these are the A8 Rectifier and A23 Motherboard service sections. For the IF-Display Section, this is the A1A8 Rectifier/A1A9 Bus Transition service section. Part numbers for these parts are found in Tables 6-3 through 6-5 in alphanumerical order.

6-5. Cables. Cables for the IF-Display Section are listed in Table 6-4. Cables for the RF Section are listed throughout Table 6-3 and in Table 6-5. Interconnect cables are W30 and W31 in Table 6-4.

Refer to Figure 2-6 for identification. Power cable part numbers and descriptions are located in Table 2-1.

6-6. Mechanical Parts. Most mechanical parts for individual assemblies are identified in illustrations using photographs in the service sections (Volumes 3 and 4) indexed by tab. Other mechanical parts are identified in Figure 6-1 through 6-11 using photographs. Part numbers for these mechanical parts can be found in the lists accompanying those photographs. Some mechanical parts are listed in Tables 6-3 through 6-5 following the listing of electrical parts.

6-7. Rack Mount Kits. Part Numbers for Front Handle Kit, Rack Mount Flange Kit, and Rack Mount Slide Kit are located in Table 6-6 (last page in this section).

6-8. ORDERING INSTRUCTIONS

6-9. To order a replacement part for the instrument, quote the Hewlett-Packard part number with the check digit (CD), indicate quantity required, and address the order to the nearest Hewlett-Packard office. Addresses of HP offices are provided at the rear of each volume of this manual.

6-10. MODULE EXCHANGE PROGRAM

6-11. The A6A8 YIG-Tuned Mixer (YTX), A11A3 YIG-Tuned Oscillator (YTO), and the A4A2/A4A3 Log Amplifiers may be ordered through the module exchange program. Table 6-3 lists the HP Part Numbers for both the new and restored parts. The restored parts may be purchased through the module exchange program at a reduced price. The lower price is dependent on the return of the defective module to Hewlett-Packard.

Table 6-1. Reference Designations and Abbreviations (1 of 2)

REFERENCE DESIGNATIONS

A assembly	E miscellaneous electrical part	P electrical connector (movable portion); plug	V electron tube
AT attenuator; isolator; termination; limiter	F fuse	Q transistor; SCR; triode thyristor	VR voltage regulator; breakdown diode (ZENER)
B fan; motor	FL filter	R resistor	W cable; transmission path; wire
BT battery	H hardware	RT thermistor	X socket
C capacitor	HY circulator	S switch	Y crystal unit (piezo-electric or quartz)
CP coupler	J electrical connector (stationary portion); jack	T transformer	Z tuned cavity; tuned circuit
CR diode; diode thyristor; varactor; SCR	K relay	TB terminal board	
DC directional coupler	L coil; inductor	TC thermocouple	
DL delay line	M meter	TP test point	
DS annunciator; signaling device (audible or visual); lamp; LED	MP miscellaneous mechanical part	U integrated circuit; microcircuit	

ABBREVIATIONS

A ampere	CC carbon composition	D data type (logic)	ECL emitter-coupled logic
A/D analog-to-digital (converter)	CCP carbon composition plastic	D/A digital-to-analog	EXCL-OR exclusive-or
ADDR adder	CER ceramic	DARL darlington (transistor)	EXT external
ADJ adjustment	CFM Cubic Feet/Minute	DBL double	F farad; female; film (resistor)
AG silver	CHAM chamfered	DC direct current	FC carbon film/ composition
AHD ahead	CHAN channel	DCCR decoder	FD feed
AL aluminum	CMOS complementary metal-oxide-semiconductor	DECD decade	FEM female
ANAL analysis	CNTR counter	DEFL deflection	FET field-effect transistor
ARITH arithmetic	COAX coaxial	DEG degree (temperature)	FF flip flop
ASSY assembly	COEFF coefficient	DEG C degree Celsius (centigrade)	FH flat head
ASYNCHRO asynchronous	COM common	DIA diameter	FL flat (washer)
AUX auxiliary	COMB combination	DIEL dielectric	FLT floater carton
BARR barrier	CONT continuous, contact	DIL dual in-line	FT gain bandwidth product
BECU beryllium copper	CONV converter; conventional	DIP dual in-line package	FW full wave
BFR buffer	CP cadmium plate	DPDT double-pole double-throw	FXD fixed
BILATL bilateral	CRT cathode ray tube	DPSLDR dip solder	G gram
BIN binary	CRY carry	DRIV drive	GE germanium
BLU blue	CTR center	DRVR driver	GEN PRP general purpose
BRDG bridge	CW clockwise; continuous wave	DVR driver	GHZ gigahertz
BRN brown		DX duplex	
BSC basic			
CAL calibrate; calibration			

NOTE

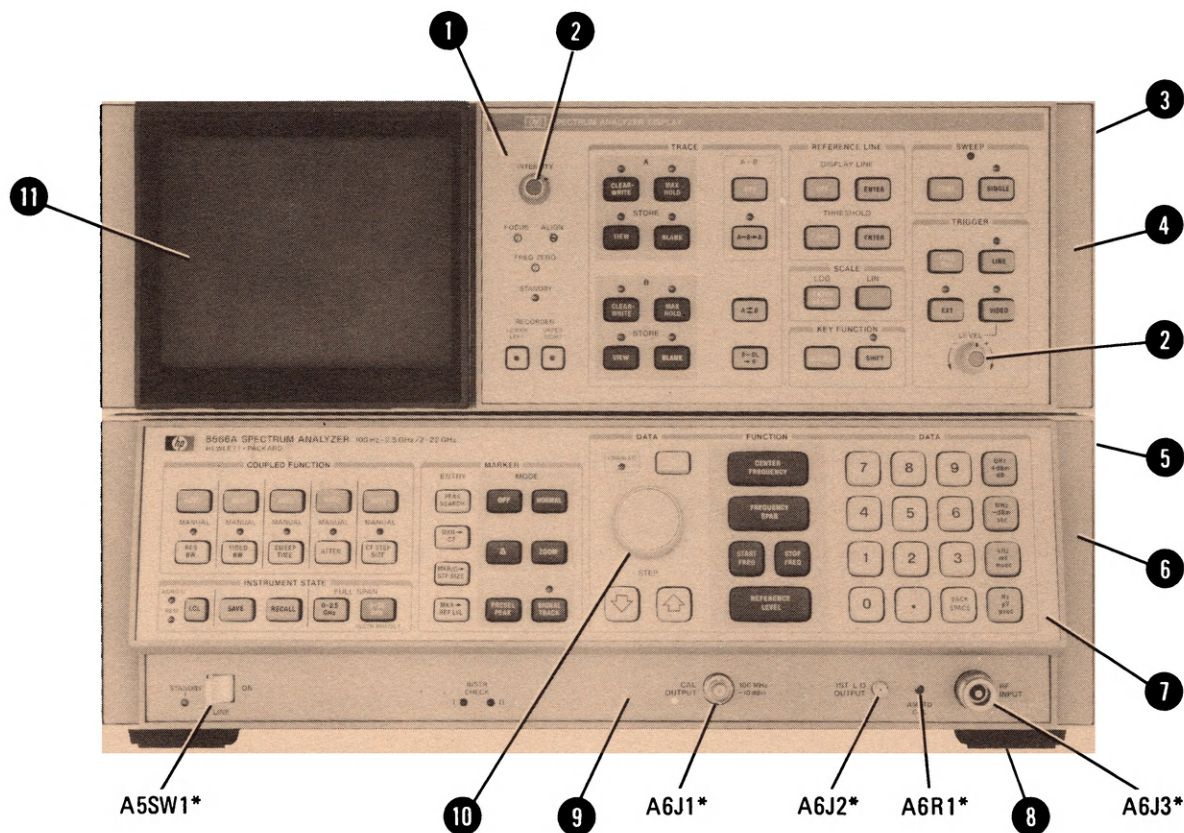
All abbreviations in the parts list will be in upper case.

Table 6-1. Reference Designations and Abbreviations (2 of 2)

GRA gray	NEG negative	Q figure of merit	T timed (slow-blow fuse)
GRN green	NH nanohenry	QUAD four-in-one	TA tantalum
H henry; logic high	NMOS N-channel MOS	RAM random access memory	TC temp of coefficient temperature compensating
HD head	NOM nominal	RCVY recovery	TD time delay
HEX hexagonal	NPN neg-pos-neg (transistor)	RECT rectifier	TERM terminal; termination
HLCL helical	NPO neg-pos-zero (zero temp coefficient)	REG regulated; regulator	TGL toggle
HP Hewlett-Packard	NRFR not recommended for field replacement	RES resistance; resistor	THRU through
HP-IB HP Interface Bus	NS nanosecond	RETRIG retriggerable	TI titanium
HV high voltage	NSR not separately replaceable	RF radio frequency	TOL tolerance
HZ hertz	OB order by description	RFI radio frequency interference	TPL triple
IC integrated circuit	OBD order by description	RGLTR regulator	TRIG triggerable
ID inside diameter	OCTL octal	RGTR register	TRMR trimmer
IEC International Electro-technical Commission	OD outside diameter	RLL roll	TRI triple
IN inch	OP AMP operational amplifier	ROM read-only memory	TRN turn(s)
IF intermediate frequency	OSC oscillator	RMS root-mean-square	TSTR transistor
INP input	PAM pulse amplitude modulation	RND round	TTL transistor-transistor logic
INSTR instrument	PAP peak average power	RPG rotary pulse generator	TVI television interference
INT internal	PCB printed circuit board	RR rear	U/W used with
INV inverter	PC printed circuit	S silicone	UA microampere
JFET junction-FET	PD power dissipation	SAE Society of Automotive Engineers	UF microfarad
K kilohm	PDM pulse duration modulation	SCR silicon controlled rectifier	UH microhenry
KV kilovolt	PERF perforated	SEC second	UL microliter
KVDC kilovolt direct current	PF picofarad	SEL select; selector	UN unit
L low logic; inductance	PIN positive-intrinsic-negative	SGL single	UNREG unregulated
LCH latch	PIV peak inverse voltage	SI silicon	V volt; variable
LED light-emitting-diode	PKG package	SIL silver	VA voltampere
LG long	PLL phase lock loop	SIP single in-line package	VAC volt, ac
LGC logic	PLO phase lock oscillator	SKT skirt; socket	VIO violet
LK lock (washer)	PM pulse modulation	SM tin; samarium; seam; small; square meter; submodulator; subminiature	VP-P volt, peak-to-peak
LO local oscillator	PNP pos-neg-pos (transistor)	SMA subminiature A type (screw-on connector)	VPK volt, peak
LOG logarithmic	P/O part of	SMB subminiature B type (snap-on connector)	VRMS volt, rms
LS low power Schottky	POLY polystyrene	SMC subminiature C type (screw-on connector)	VRRM repetitive peak inverse voltage
LUM luminous	POLYC polycarbonate	SNP snap	VTO voltage-controlled oscillator
M male; megohm	POLYE polyethylene	SPCG spacing	VV valley-point voltage
M meter	PORC porcelain	SPDT single-pole double-throw	VVC voltage variable capacitor
M/S master/slave	POS positive; position	SPST single-pole single-throw	W watt
MA milliampere	PP peak-to-peak	SQ square	WHT white
MCD millicandella	PRL parallel	SUB subsidiary	WV working volts
MHZ megahertz	PS pico second	SUBMIN subminiature	WW wire wound
MIN minute; minimum	PSTN piston	SW switch; single wall	XSTR transistor
MISC miscellaneous	PVR peak voltage, reverse	SYNCH synchronous	YEL yellow
MLD mold	PW pulse width	SZ size	YIG yttrium-iron-garnet
MM millimeter	PWR power		YTO YIG-tuned oscillator
MONOSTBL monostable	PWV peak working voltage		Z impedance
MOS metal-oxide-semiconductor	PWW precision wire wound		ZNR zener
MOSFET MOS field-effect transistor			ZO characteristic impedance
MP micro processor			
MTG mounting			
MUXR multiplexer			
MV multivibrator			
MW milliwatt			

NOTE

All abbreviations in the parts list will be in upper case.



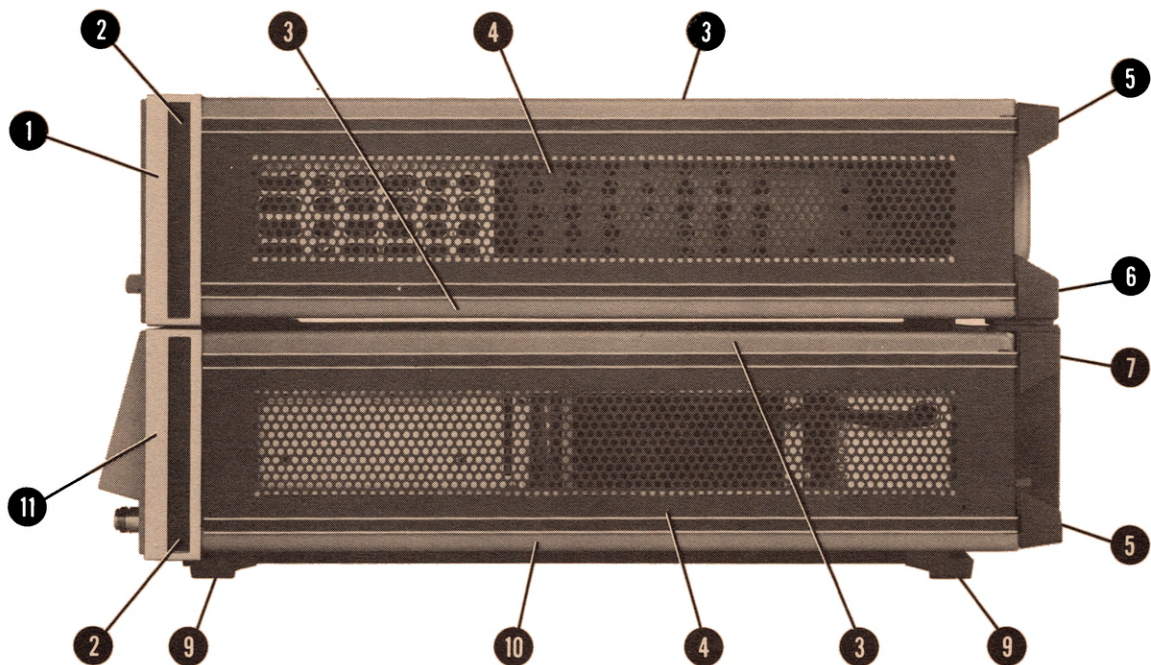
*REFER TO TABLE 6-3 FOR PART NUMBERS.

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	85662-00054	8	Panel, Front Dress, IF-Display Section	28480	85662-00054
2	0370-1005	2	Knob, Intensity and Trigger LEVEL Controls	28480	0370-1005
3	5020-8803	6	Frame, Front, IF-Display Section	28480	5020-8803
4	85662-20064	2	Bezel, Mainframe	28480	85662-20064
5	85660-20084	4	Frame, Front, RF Section	28480	85660-20084
6	85680-20125	8	Bezel, Front	28480	85680-20125
7	85660-00032	0	Panel, Dress, Upper Front, RF Section	28480	85660-00032
8	5040-7201	8	Foot, Bottom	28480	5040-7201
9	85660-00057	9	Panel, Front Dress, Lower, RF Section	28480	85660-00057
10	0370-2992	8	Knob, Round, RPG, DATA Control	28480	0370-2992
11	5040-7253	0	Bezel, CRT	18480	5040-7253

Figure 6-1. Overall Instrument Parts Identification, Front View

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	2510-0136	8	Screw, 8-32, 2.5-IN-LG, PAN HD	28480	2510-0136
2	2200-0103	2	Screw, 4-40, .25-IN LG, PAN HD	28480	2200-0103
3	2360-0219	9	Screw, 6-32, 1.375-IN LG, PAN HD	28480	2360-0219
4	2190-0018	5	Washer, Lk, HLCL, No. 6, .141-IN ID	28480	2190-0018
5	0570-1171	7	Screw, Cover Mounting, 6-32, .460-IN LG	28480	0570-1171
6	0510-0043	4	Retainer Ring for Screw 5	28480	0510-0043
7	86701-00007	1	Guard, Fan	28480	86701-00007
8	08505-20157	2	Lock Foot	28480	08505-20157
9	08505-20158	3	Lock Foot	28480	08505-20158
10	2360-0332	7	Screw, 6-32, .312-IN LG, PAN HD	28480	2360-0332
11	5040-7201	8	Foot, Bottom	28480	5040-7201
12	85660-20062	8	Support, PC Board, Rear	28480	85660-20062
13	85660-00043	3	Housing, Side, Fan	28480	85660-00043
14	2200-0770	9	Screw, Mach, 4-40, .188-IN LG, 100 DEG FL	28480	2200-0770
15	2200-0105	4	Screw, Mach, 4-40, .312-IN LG, PAN HD	28480	2200-0105
16	1520-0205	2	Mount, Isolation	28480	1520-0205
17	85660-20092	4	Snubber, Fan	28480	85660-20092
18	1251-2942	7	Screw, 4-40 (Includes nut and washer)	28480	1251-2942
19	2360-0115	4	Screw, Mach, 6-32, .312-IN LG, PAN HD	28480	2360-0115
20	85660-00011	5	Panel, Rear, RF Section	28480	85660-00011
21	85660-20061	7	Heatsink, Transistor	28480	85660-20061
22	08505-20156	1	Lock Foot	28480	08505-20156
23	08505-20155	0	Lock Foot	28480	08505-20155
24	5040-7221	2	Foot, Rear	28480	5040-7221

Figure 6-2. Overall Instrument Parts Identification, Rear View (2 of 2)



Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	5020-8803	6	Frame, Front, IF-Display Section	28480	5020-8803
2	5001-0439	8	Trim Strip, Front Frame, Side	28480	5001-0439
3	5060-9835	0	Cover, 18-IN (For top and bottom w/o feet)	28480	5060-9835
4	5060-9912	4	Cover, 18-IN, Side, Perforated	28480	5060-9912
5	5040-7221	2	Foot, Rear	28480	5040-7221
6	08505-20155	0	Lock Foot	28480	08505-20155
7	08505-20156	1	Lock Foot	28480	08505-20156
8	85660-00043	3	Housing, Side, Fan	28480	85660-00043
9	5040-7201	8	Foot, Bottom	28480	5040-7201
10	5060-9847	4	Cover, 18-IN, (For bottom with feet)	28480	5060-9847
11	85660-20084	4	Frame, Front, RF Section	28480	85660-20084

Figure 6-3. Overall Instrument Parts Identification, Right Side View

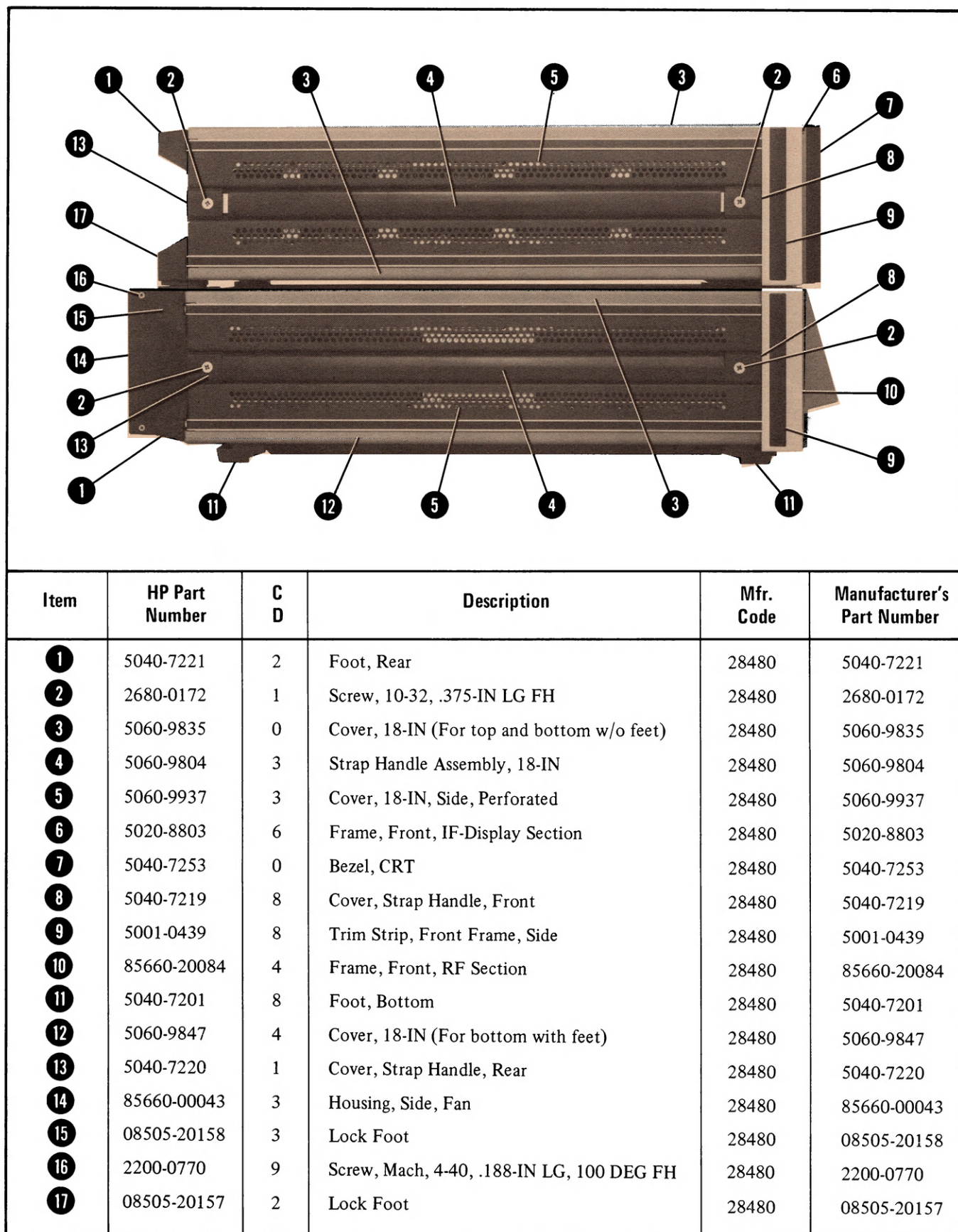
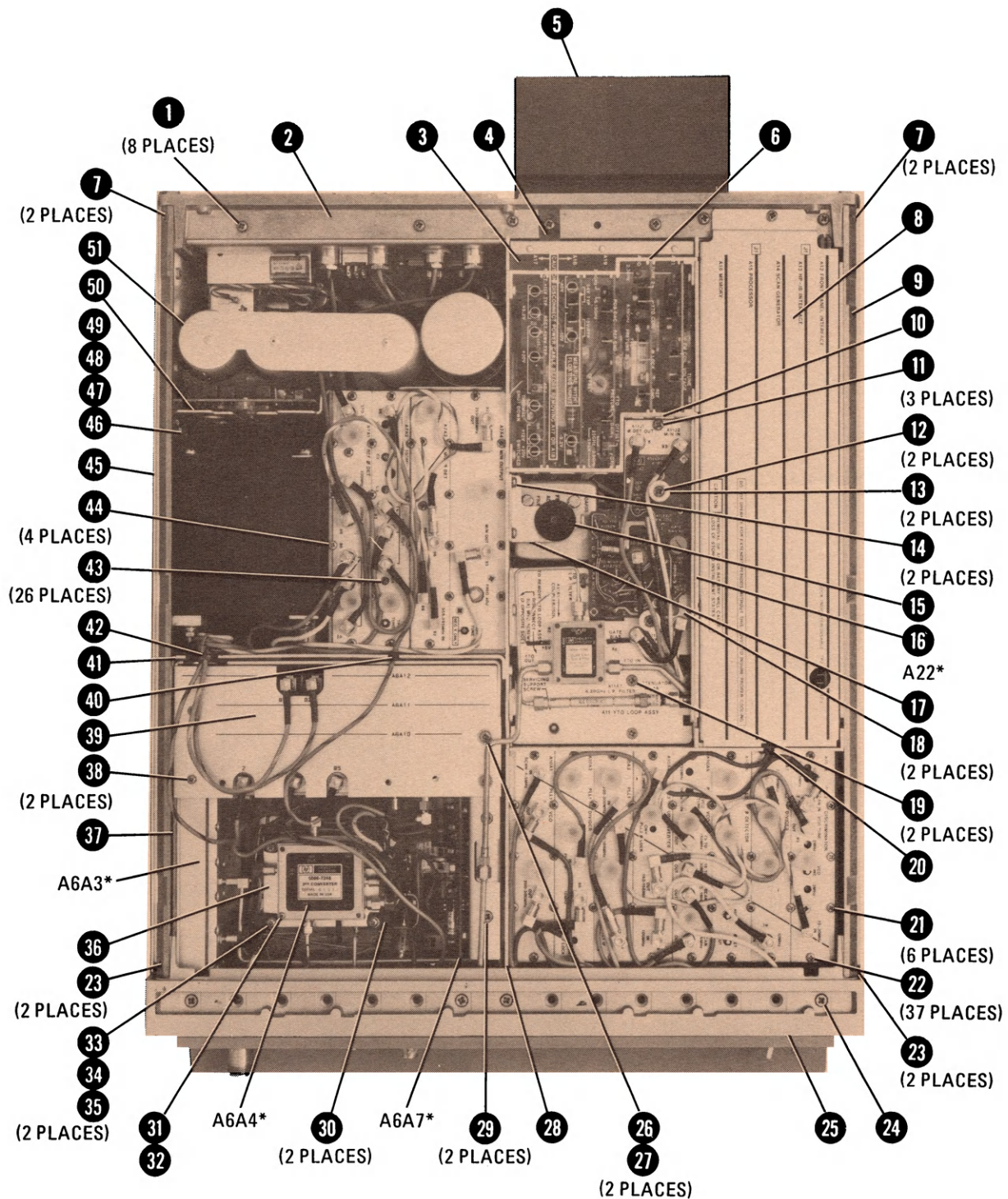


Figure 6-4. Overall Instrument Parts Identification, Left Side View



*REFER TO TABLE 6-3 FOR PART NUMBERS.

Figure 6-5. RF Section Parts Identification, Bottom View (1 of 3)

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	2360-0115	4	Screw, Mach, 6-32, .312-IN LG, PAN HD	28480	2360-0115
2	85660-20085	5	Frame, Rear, RF Section	28480	85660-20085
3	85660-00036	4	Cover, Plastic, Regulator	28480	85660-00036
4	86701-00028	6	Spring, Flat (For Cover 3)	28480	86701-00028
5	85660-00045	5	Housing, Fan, Bottom	28480	85660-00045
6	86701-20005	1	Guide, PC Board, Regulator	28480	86701-20005
7	2510-0195	9	Screw, 8-32, .375-IN LG, 100 DEG FH	28480	2510-0195
8	85660-00005	7	Cover, Controller	28480	85660-00005
9	85660-20099	1	Strut, Corner, 18-IN	28480	85660-20099
10	86701-20006	2	Guide, PC Board, Regulator	28480	86701-20006
11	2360-0331	6	Screw, Mach, 6-32, .25-IN LG, PAN HD	28480	2360-0331
12	2200-0103	2	Screw, Mach, 4-40, .35-IN LG, PAN HD	28480	2200-0103
13	85660-20100	5	Extractor, PC Board	28480	85660-20100
14	2360-0111	0	Screw, Mach, 6-32, .188-IN LG, PAN HD	28480	2360-0111
15	1520-0205	2	Mount, Isolation (For A22)	28480	1520-0205
16	85660-00002	4	Divider, Processor	28480	85660-00002
17	85660-00026	2	Shock Mount, Bottom (For A22)	28480	85660-00026
18	2200-0103	2	Screw, Mach, 4-40, .25-IN LG, PAN HD	28480	2200-0103
19	2360-0333	8	Screw, Mach, 6-32, .25-IN LG, 100 DEG FH	28480	2360-0333
20	0400-0009	9	Grommet, Round, .125-IN ID, .25-IN OD	28480	0400-0009
21	85660-60100	9	Screw, Mach, 4-40, .312-IN LG, PAN HD (Includes washer)	28480	85660-60100
22	2200-0105	4	Screw, Mach, 4-40, .312-IN LG, 82 DEG FH	28480	2200-0105
23	2510-0192	6	Screw, 8-32, .25-IN LG, 100 DEG FH	28480	2510-0192
24	2360-0116	5	Screw, Mach, 6-32, .312 IN LG, 82 DEG FH	28480	2360-0116
25	85660-20084	4	Frame, Front, RF Section	28480	85660-20084
26	2360-0117	6	Screw, Mach, 6-32, .375-IN LG, PAN HD	28480	2360-0117
27	3050-0227	3	Washer, Flat, NO. 6, .149-IN (For screw 26)	28480	3050-0227
28	85660-00001	3	Divider, Center	28480	85660-00001
29	2360-0116	5	Screw, Mach, 6-32, .312-IN LG, 82 DEG FH	28480	2360-0116
30	1400-0053	4	Clamp, Cable, Nylon, .172-IN DIA, .375-IN WIDE	28480	1400-0053
31	0520-0137	3	Screw, Mach, 2-56, .75-IN LG, PAN HD	28480	0520-0137
32	2190-0890	1	Washer, Lock, HLCL, NO. 2 (For screw 31)	28480	2190-0890
33	2200-0145	2	Screw, Mach, 4-40, .438-IN LG, PAN HD	28480	2200-0145

Figure 6-5. RF Section Parts Identification, Bottom View (2 of 3)

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
34	2190-0003	8	Washer, Lock HLCL, NO. 4 (For screw 33)	28480	2190-0003
35	3050-0105	6	Washer, Flat, NO. 4 (For screw 33)	28480	3050-0105
36	85660-00021	7	Cover, Microcircuit Mount	28480	85660-00021
37	85660-00015	9	Main Bracket, RF Module	28480	85660-00015
38	2360-0115	4	Screw, Mach, 6-32, .312-IN LG, PAN HD	28480	2360-0115
39	85660-00022	8	Cover, PC Board, RF Module	28480	85660-00022
40	0400-0009	9	Grommet, Round, .125-IN ID, .25-IN OD	28480	0400-0009
41	85660-00007	9	Chassis, RF Module	28480	85660-00007
42	0400-0219	3	Grommet, Round, .5-IN ID, .093-IN WIDE	28480	0400-0219
43	2200-0105	4	Screw, Mach, 4-40, .312-IN LG, PAN HD	28480	2200-0105
44	85660-60100	9	Screw, Mach, 4-40, .312-IN LG, PAN HD (Includes washer)	28480	85660-60100
45	5020-8837	6	Strut, Corner, 18-IN	28480	5020-8837
46	2360-0197	2	Screw, Mach, 6-32, .375-IN LG, PAN HD	28480	2360-0197
47	2190-0006	1	Washer, Lock, HLCL, NO. 6 (For screw 46)	28480	2190-0006
48	3050-0227	3	Washer, Flat, NO. 6 (For screw 46)	28480	3050-0227
49	2420-0002	6	Nut, Hex, 6-32 Thread (For screw 46)	28480	2420-0002
50	85660-00013	7	Support, PC Board, Rectifier	28480	85660-00013
51	86701-00016	2	Support, Capacitor	28480	86701-00016

Figure 6-5. RF Section Parts Identification, Bottom View (3 of 3)

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	2510-0195	9	Screw, 8-32, .375-IN LG, 100 DEG FH	28480	2510-0195
2	2680-0129	8	Screw, Mach, 10-21, .312-IN LG, PAN HD	28480	2680-0129
3	2190-0011	8	Washer, Lock, Internal Tooth (For screw 2)	28480	2190-0011
4	2200-0153	2	Screw, Mach, 4-40, .875-IN LG, PAN HD	28480	2200-0153
5	3050-0105	6	Washer, Flat, NO. 4 (For screw 4)	28480	3050-0105
6	2360-0197	2	Screw, Mach, 6-32, .375-IN LG, PAN HD	28480	2360-0197
7	2190-0006	1	Washer, Lock, HLCL, NO. 6 (For screw 6)	28480	2190-0006
8	3050-0227	3	Washer, Flat, NO. 6 (For screw 6)	28480	3050-0227
9	2420-0002	6	Nut, Hex, 6-32 Thread (For screw 6)	28480	2420-0002
10	85660-20098	0	Strut, Corner, 18-IN	28480	85660-20098
11	2360-0113	2	Screw, Mach, 6-32, .25-IN LG, PAN HD	28480	2360-0113
12	2200-0105	4	Screw, Mach, 4-40, .312-IN LG, PAN HD	28480	2200-0105
13	2360-0017	5	Screw, Mach, 6-32, .375-IN LG, PAN HD	28480	2360-0017
14	2510-0192	6	Screw, 8-32, .25-IN LG, 100 DEG FH	28480	2510-0192
15	2360-0116	5	Screw, Mach, 6-32, .312-IN LG, 82 DEG FH	28480	2360-0116
16	85660-00019	3	Mount, Attenuator	28480	85660-00019
17	5020-0137	3	Screw, Mach, 2-56, .75-IN LG, PAN HD	28480	5020-0137
18	2190-0680	7	Washer, Lock, HLCL, NO. 2 (For screw 17)	28480	2190-0680
19	85660-20072	0	Mount, Microcircuit	28480	85660-20072
20	2360-0119	8	Screw, Mach, 6-32, .438-IN LG, PAN HD	28480	2360-0119
21	85660-00033	1	Insulator, PC Board, Plastic	28480	85660-00033
22	5020-8837	6	Strut, Corner, 18-IN	28480	5020-8837
23	0570-0034	9	Screw, Mach, 4-40, .25-IN LG, RND HD, PLASTIC	28480	0570-0034
24	2360-0115	4	Screw, Mach, 6-32, .312-IN LG, PAN HD	28480	2360-0115
25	85660-00044	4	Housing, Fan, Top	28480	85660-00044
26	2360-0268	8	Lug, Terminal, Ground	28480	2360-0268
27	1400-0907	7	Clamp, Wire	05683	3/16-HFR
28	2190-0003	8	Washer, Lock, HLCL, NO. 4 (For screw 4)	28480	2190-0003

Figure 6-6. RF Section Parts Identification, Top View (2 of 2)

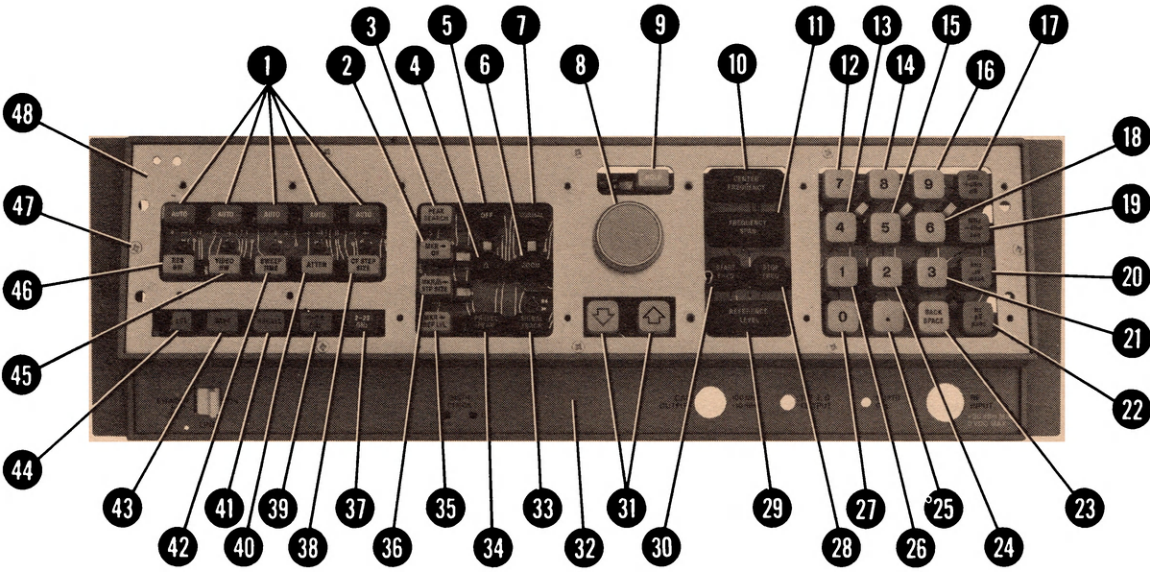
					
Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	5041-0706	6	Key— AUTO	28480	5041-0706
2	5041-0712	4	Key— MKR → CF	28480	5041-0712
3	5041-0938	6	Key— PEAK SEARCH	28480	5041-0938
4	5041-0716	8	Key— Δ	28480	5041-0716
5	5041-0692	9	Key— OFF	28480	5041-0692
6	5041-0717	9	Key— ZOOM	28480	5041-0717
7	5041-0698	5	Key— NORMAL	18480	5041-0698
8	0370-2992	8	Knob—Round	28480	0370-2992
9	5041-0725	9	Key— HOLD	28480	5041-0725
10	5041-0673	6	Key— CENTER FREQUENCY	28480	5041-0673
11	5041-0674	7	Key— FREQUENCY SPAN	28480	5041-0674
12	5041-0751	1	Key— 7	28480	5041-0751
13	5041-0748	6	Key— 4	28480	5041-0748
14	5041-0752	2	Key— 8	28480	5041-0752
15	5041-0749	7	Key— 5	28480	5041-0749
16	5041-0753	3	Key— 9	28480	5041-0753
17	5041-0727	1	Key— GHz +dBm dB	28480	5041-0727
18	5041-0750	0	Key— 6	28480	5041-0750

Figure 6-7. RF Section Parts Identification, Front Panel (1 of 3)





























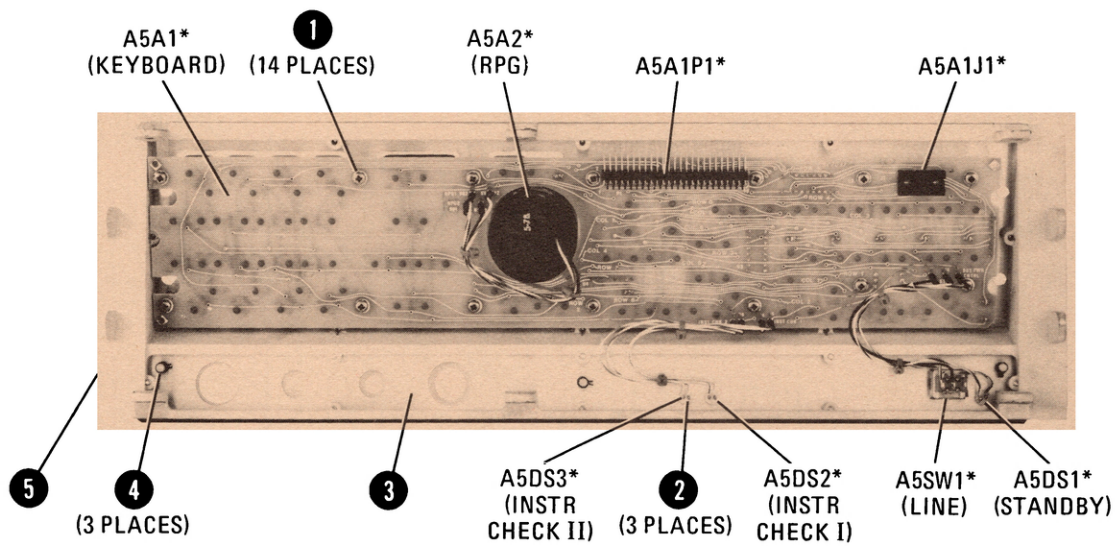
Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
19	5041-0728	2	Key— 	28480	5041-0728
20	5041-0729	3	Key— 	28480	5041-0729
21	5041-0828	3	Key— 	28480	5041-0828
22	5041-0730	6	Key— 	28480	5041-0730
23	5041-0757	7	Key— 	28480	5041-0757
24	5041-0827	2	Key— 	28480	5041-0827
25	5041-0755	5	Key— 	28480	5041-0755
26	5041-0826	1	Key— 	28480	5041-0826
27	5041-0754	4	Key— 	28480	5041-0754
28	5041-0669	0	Key— 	18480	5041-0669
29	5041-0675	8	Key— 	28480	5041-0675
30	5041-0668	9	Key— 	28480	5041-0668
31	5041-0756	6	Key—  	28480	5041-0756
32	85660-00057	9	Panel, Dress, Lower Front	28480	85660-00057
33	5041-0937	5	Key— 	28480	5041-0937
34	5041-0917	1	Key— 	28480	5041-0917
35	5041-0715	7	Key— 	28480	5041-0715
36	5041-0714	6	Key— 	28480	5041-0714
37	5041-0724	8	Key— 	28480	5041-0724
38	5041-0711	3	Key— 	28480	5041-0711
39	5041-0723	7	Key— 	28480	5041-0723
40	5041-0710	2	Key— 	28480	5041-0710
41	5041-0775	9	Key— 	28480	5041-0775
42	5041-0709	9	Key— 	28480	5041-0709
43	5041-0095	6	Key— 	28480	5041-0095
44	5041-0726	0	Key— 	28480	5041-0726
45	5041-0708	8	Key— 	28480	5041-0708
46	5041-0707	7	Key— 	28480	5041-0707
47	0624-0203	9	Screw, 4-40, .312 IN LG, 82 DEG FL HD	28480	0624-0203
48	85660-00031	9	Panel, Sub, Upper Front	28480	05660-00031

Figure 6-7. RF Section Parts Identification, Front Panel (2 of 3)



*REFER TO TABLE 6-3 FOR PART NUMBERS.

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	2200-0103	2	Screw, Mach, 4-40, .24-IN LG, PAN HD	28480	2200-0103
2	85680-40004	4	Mount, LED (For INSTR CHECK LEDs)	28480	85680-40004
3	85660-00056	8	Panel, Sub, Lower Front	28480	85660-00056
4	0510-1148	2	Retainer, Push-On (To attach dress panels)	28480	0510-1148
5	85680-20125	8	Bezel, Front, RF Section	28480	85680-20125

Figure 6-7. RF Section Parts Identification, Front Panel (3 of 3)

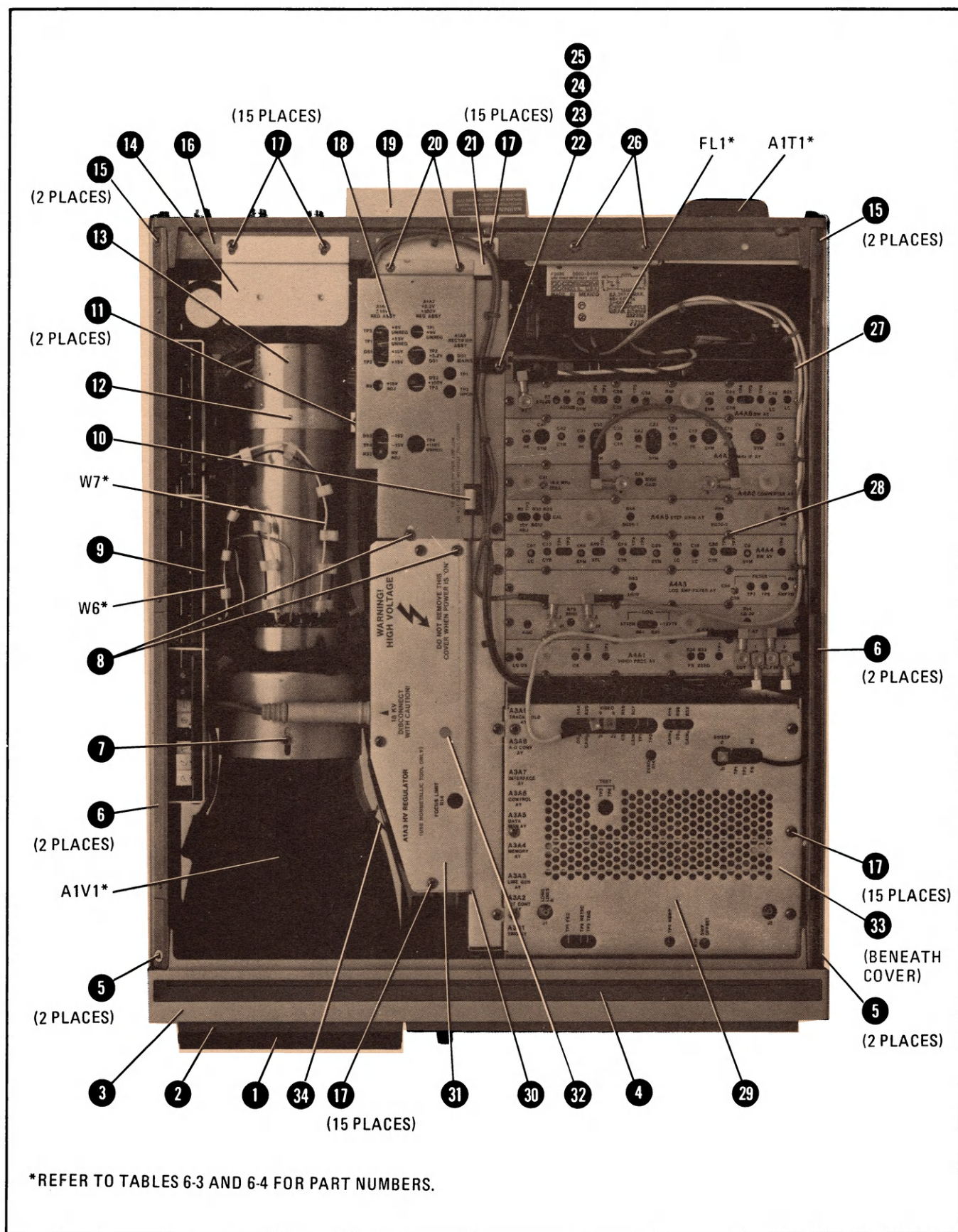
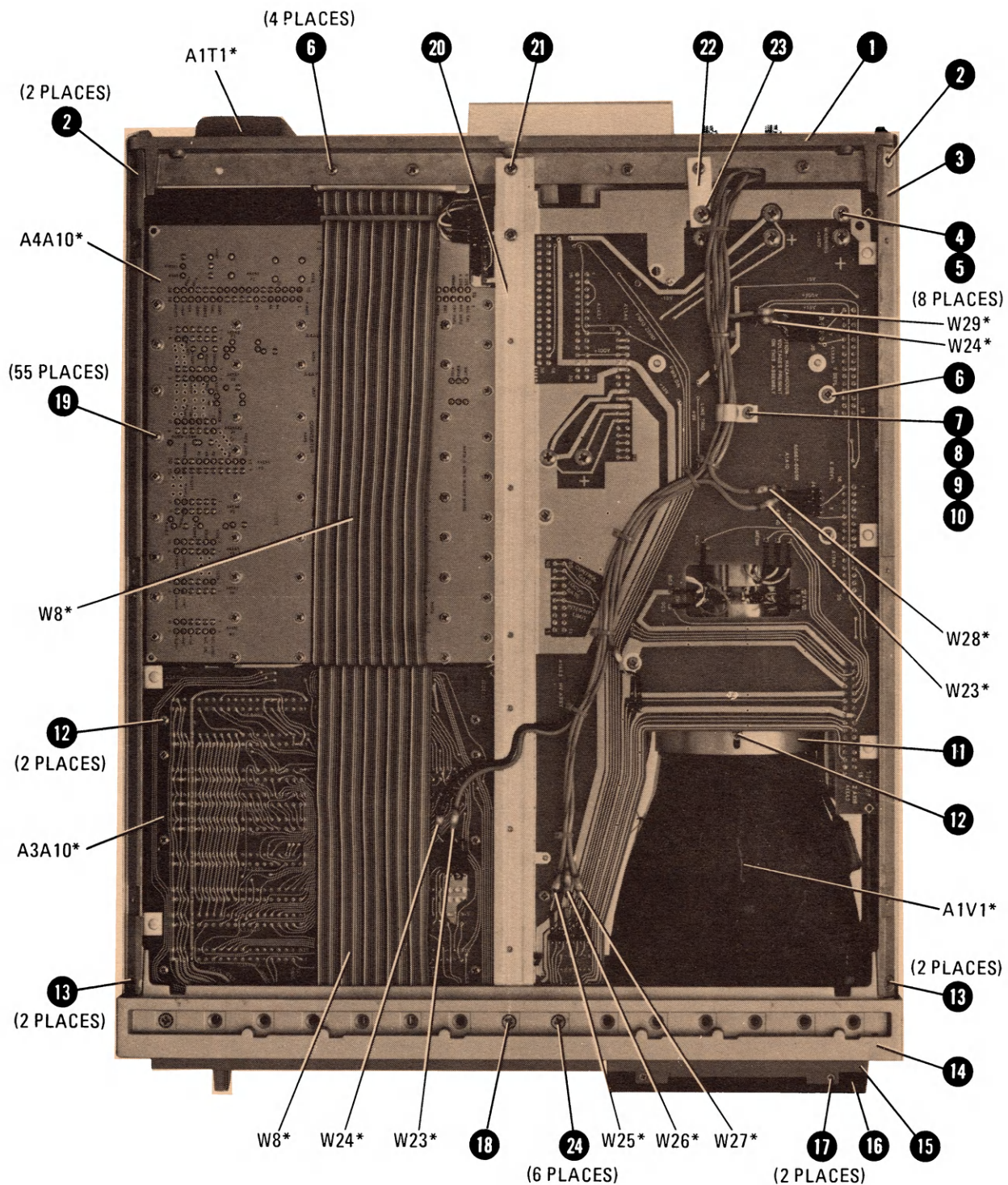


Figure 6-8. IF-Display Section Parts Identification, Top View (1 of 2)

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	5040-7253	0	Bezel, CRT	28480	5040-7253
2	85662-20064	2	Bezel, Mainframe	28480	85662-20064
3	5020-8803	6	Frame, Front	28480	5020-8803
4	5040-7202	9	Trim, Top	28480	5040-7202
5	2510-0192	6	Screw, 8-32, .25-IN-LG 100 DEG FH	28480	2510-0192
6	5020-8882	1	Strut, Corner, 18"	28480	5020-8882
7	2200-0103	2	Screw, 4-40, .25-IN-LG PAN-HD	28480	2200-0103
8	2360-0115	4	Screw, 6-32, .312-IN-LG PAN-HD	28480	2360-0115
9	85662-00037	7	Shield, Amplifier	28480	85662-00037
10	85662-00040	2	Bracket, Capacitor	28480	85662-00040
11	2360-0221	3	Screw, 6-32, .25-IN-LG PAN-HD	28480	2360-0221
12	08505-00121	8	Clamp, CRT Shield	28480	08505-00121
13	1220-0203	4	Shield, CRT	28480	1220-0203
14	85660-00041	3	Bracket, Dual Capacitor	28480	85662-00041
14	85662-00062	8	Bracket, Tri-Capacitor (Option 400)	28480	85662-00062
15	2510-0195	9	Screw, 8-32, .375-IN-LG 100 DEG FH	28480	2510-0195
16	85660-20030	2	Frame, Rear	28480	85662-20030
17	2360-0115	4	Screw, 6-32, .312-IN-LG PAN-HD	28480	2360-0115
18	85662-00049	1	Shroud, Airduct (Voltage Regulator Cover)	28480	85662-00049
19	86701-00007	1	Guard, Fan	28480	86701-00007
20	2360-0111	0	Screw, 6-32, .188-IN-LG PAN-HD	28480	2360-0111
21	85662-00046	8	Bracket, PC Board	28480	85662-00046
22	2360-0197	2	Screw, 6-32, .5-IN-LG PAN-HD	28480	2360-0197
23	3050-0227	3	Washer, F1 for Screw 22	28480	3050-0227
24	2190-0006	1	Washer, Lk for Screw 22	28480	2190-0006
25	1400-0017	0	Clamp—Cable, .312-DIA, .375-WIDE	04495	1953-5B-RED
26	2360-0113	2	Screw, 6-32, .25-IN-LG PAN-HD	28480	2360-0113
27	85662-20017	5	IF Housing Casting	28480	85662-20017
28	2200-0107	6	Screw, 4-40, .375-IN-LG	28480	2200-0107
29	85662-00044	6	Cover-Digital Storage	28480	85662-00044
30	85662-00052	6	Cover-Side HV	28480	85662-00052
31	85662-00036	6	Cover-HV Supply	28480	85662-00036
32	85662-20042	6	Guide-HV, Nylon	28480	85662-20042
33	85662-60099	7	Shield Assy-Digital Storage (beneath cover 29)	28480	85662-60099

Figure 6-8. IF-Display Section Parts Identification, Top View (2 of 2)

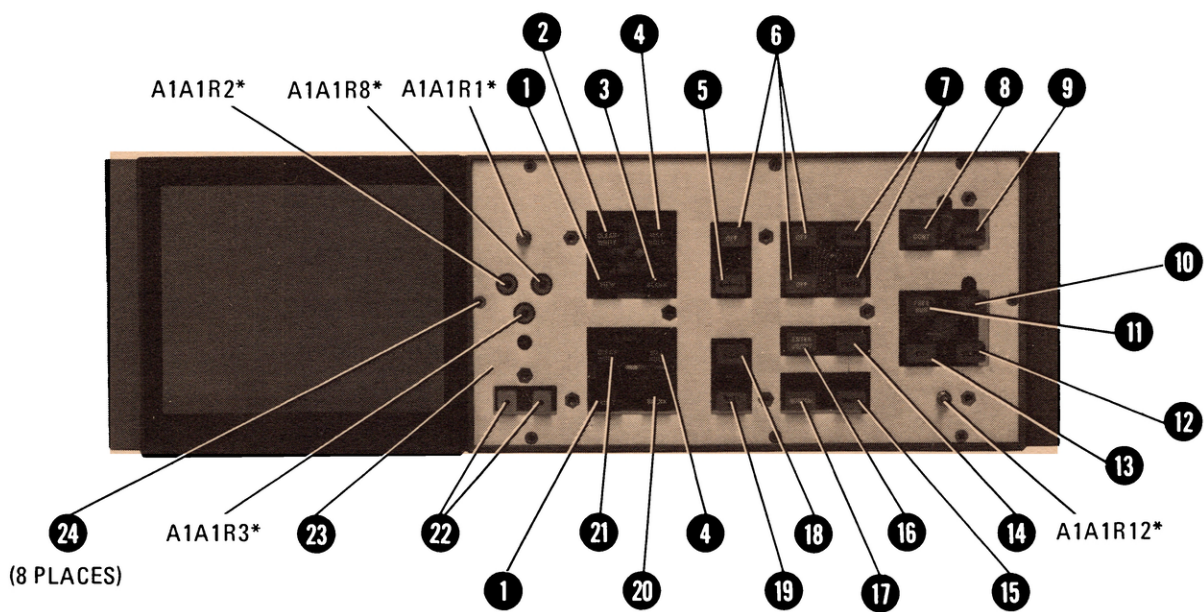


*REFER TO TABLES 6-3 AND 6-4 FOR PART NUMBERS.

Figure 6-9. IF-Display Section Parts Identification, Bottom View (1 of 2)

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	85662-20030	2	Frame, Rear	28480	85662-20030
2	2510-0195	9	Screw, 8-32, .375-IN-LG 100 DEG FH	28480	2510-0195
3	5020-8882	1	Strut, Corner, 18"	28480	5020-8882
4	2190-0011	8	Washer-Lk for Screw 5	02440	1022
5	2680-0099	1	Screw, 10-32, .375-IN-LG PAN-HD	28480	2680-0099
6	2360-0113	2	Screw, 6-32, .25-IN-LG PAN-HD	28480	2360-0113
7	1400-0014	7	Clamp, Cable	28480	1400-0014
8	2360-0113	2	Screw, 6-32, .25-IN-LG PAN-HD	28480	2360-0113
9	3050-0105	6	Washer-Fl for Screw 8	28480	3050-0105
10	2190-0003	8	Washer-Lk for Screw 8	28480	2190-0003
11	1220-0203	4	Shield, CRT	28480	1220-0203
12	2200-0103	2	Screw, 4-40, .25-IN-LG PAN-HD	28480	2200-0103
13	2510-0192	6	Screw, 8-32, .15-IN-LG 100 DEG FH	28480	2510-0192
14	5020-8803	6	Frame, Front	28480	5020-8803
15	85662-20064	2	Bezel, Mainframe	28480	85662-20064
16	5040-7253	0	Bezel, CRT	28480	5040-7253
17	0520-0163	0	Screw, 2-56, .18-IN-LG 82 DEG FH	28480	0520-0163
18	2360-0118	7	Screw, 6-32, .375-IN-LG 82 DEG FH	28480	2360-0118
19	2200-0105	4	Screw, 4-40, .312-IN-LG PAN-HD	28480	2200-0105
20	85662-20031	3	Support, Center Member	28480	85662-20031
21	2360-0121	2	Screw, 6-32, .500-IN-LG PAN-HD	28480	2360-0121
22	85662-00053	7	Strap	28480	85662-00053
23	2360-0115	4	Screw, 6-32, .312-IN-LG PAN-HD	28480	2360-0115
24	2360-0116	5	Screw, 6-32, .312 LG 82 DEG FH	28480	2360-0116

Figure 6-9. IF-Display Section Parts Identification, Bottom View (2 of 2)



*REFER TO TABLE 6-3 FOR PART NUMBERS.

Figure 6-10. IF-Display Section Parts Identification, Front Panel View (1 of 3)























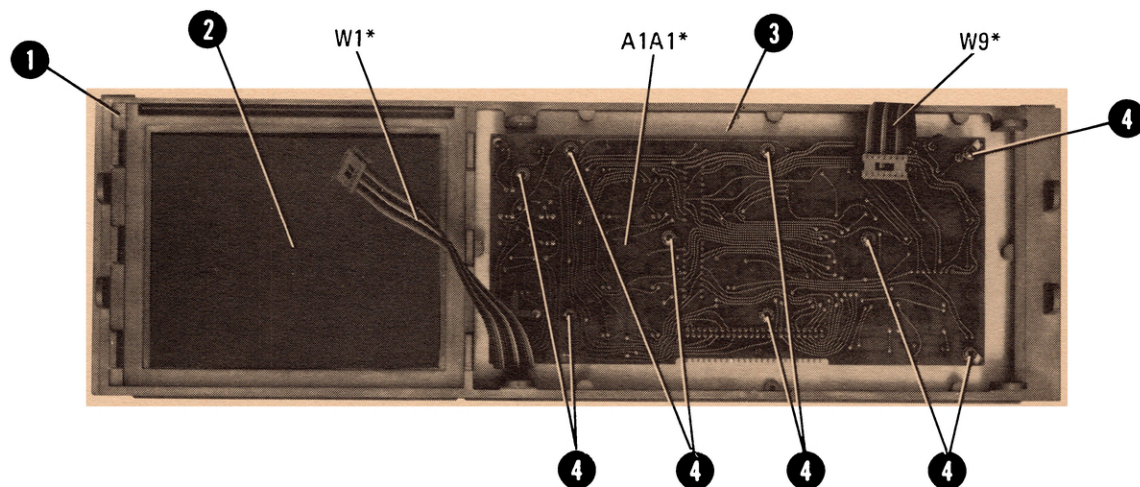
Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	5041-0690	7	Key— 	28480	5041-0690
2	5041-0688	3	Key— 	28480	5041-0688
3	5041-0807	8	Key— 	28480	5041-0807
4	5041-0689	4	Key— 	28480	5041-0689
5	5041-0732	8	Key— 	28480	5041-0732
6	5041-0693	0	Key— 	28480	5041-0693
7	5041-0696	3	Key— 	28480	5041-0696
8	5041-0700	0	Key— 	28480	5041-0700
9	5041-0701	1	Key— 	28480	5041-0701
10	5041-0703	3	Key— 	28480	5041-0703
11	5041-0702	2	Key— 	28480	5041-0702
12	5041-0705	5	Key— 	28480	5041-0705
13	5041-0704	4	Key— 	28480	5041-0704
14	5041-0310	8	Key— LINEAR 	28480	5041-0310
15	5041-0699	6	Key— 	28480	5041-0699
16	5041-0733	9	Key— 	28480	5041-0733
17	5041-0697	4	Key— 	28480	5041-0697
18	5041-0694	1	Key— 	28480	5041-0694
19	5041-0916	0	Key— 	28480	5041-0916
20	5041-0691	8	Key— 	28480	5041-0691
21	5041-0806	7	Key— 	28480	5041-0806
22	5041-0285	6	Key—RECORDER 	28480	5041-0285
23	85662-00030	0	Panel, Sub Front	28480	85662-00030
24	0624-0201	7	Screw, 4-40, .188-IN-LG 82 DEG FL HD	28480	0624-0201

Figure 6-10. IF-Display Section Parts Identification, Front Panel View (2 of 3)

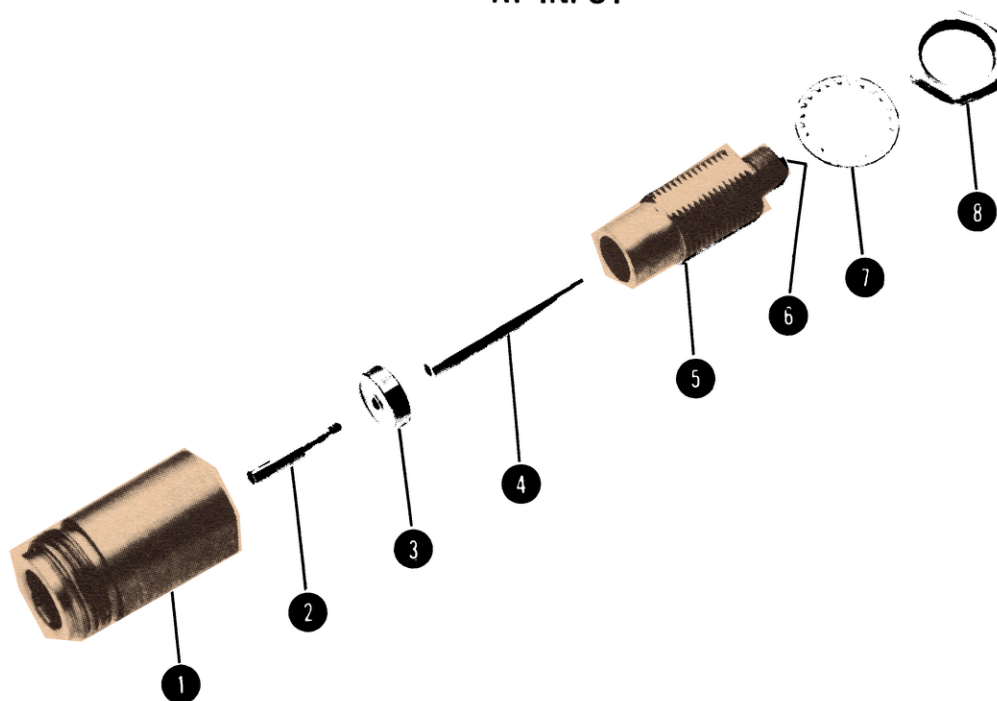


*REFER TO TABLES 6-3 AND 6-4 FOR PART NUMBERS.

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	85662-20064	2	Bezel, Mainframe	28480	85662-20064
2	9135-0052	8	RFI Shield; Glass	28480	9135-0052
3	85662-00030	0	Panel, Sub Front	28480	85662-00030
4	2200-0103	2	Screw, 4-40 .25-IN-LG PAN-HD	28480	2200-0103

Figure 6-10. IF-Display Section Parts identification, Front Panel View (3 of 3)

**A6J3
RF INPUT**



Item	HP Part Number	C D	Description	Mfr. Code	Mfr. Part Number
A6J3	86290-60005	7	Connector Assy (Type N)	28480	86290-60005
1	1250-1577	0	Body: RF Connector (Type N)	02660	131-150
2	1250-0915	8	Contact: RF Connector (Type N)	02660	131-149
3	5040-0306	0	Insulator	28480	5040-0306
4	08555-20093	5	Center Conductor	28480	08555-20093
5	08555-20094	6	Body: Bulkhead	28480	08555-20094
6	08761-2027	4	Insulator	28480	08761-2027
7	2190-0104	0	Washer: Lock 0.439" ID	28480	2190-0104
8	2950-0132	6	Nut: Hex 7/16 – 28	28480	2950-0132

Figure 6-11. RF INPUT Connector, Parts Identification

Table 6-2. Listing of Manufacturer's Codes

Mfr No.	Manufacturer Name	Address		Zip Code
00136	MCCOY ELECTRONICS CO	HOLLY SPRINGS	PA	17065
0046G	NORELCO NORTH AMER PHILIPS LIT CORP	LOS ANGELES	CA	90021
00853	SANGAMO ELEC CO S CAROLINA DIV	PICKENS	SC	29671
01121	ALLEN-BRADLEY CO	MILWAUKEE	WI	53204
01295	TEXAS INSTR INC SEMICOND CMPNT DIV	DALLAS	TX	75222
0192B	RCA CORP SOLID STATE DIV	SOMERVILLE	NJ	08876
02111	SPECTROL ELECTRONICS CORP	CITY OF IND	CA	91745
02114	FERROXCUBE CORP	SAUGERTIES	NY	12477
02660	BUNKER RAMO CORP AMPHENOL CONN DIV	BROADVILLE	IL	60153
03508	GE CO SEMICONDUCTOR PROD DEPT	SYRACUSE	NY	13201
03888	KDI PYROFILM CORP	WHIPPANY	NJ	07981
04713	MOTOROLA SEMICONDUCTOR PRODUCTS	PHOENIX	AZ	85062
05245	CORCOM INC	CHICAGO	IL	60657
06001	GE CO ELEK CAP & BAT PROD DEPT	IRMO	SC	29063
06665	PRECISION MONOLITHICS INC	SANTA CLARA	CA	95050
07263	FAIRCHILD SEMICONDUCTOR DIV	MOUNTAIN VIEW	CA	94042
11236	CTS OF BERNE INC	BERNE	IN	46711
12969	UNITRODE CORP	WATERTOWN	MA	02172
13606	SPRAGUE ELECT CO SEMICONDUCTOR DIV	CONCORD	NH	03301
14140	EDISON ELEK DIV MCRAW-EDISON	MANCHESTER	NH	03130
16179	OMNI SPECTRA INC	FARMINGTON	MI	03054
16546	US CAPACITOR CORP	BURBANK	CA	91504
17856	SILICONIX INC	SANTA CLARA	CA	95054
18324	SIGNETICS CORP	SUNNYVALE	CA	94086
18612	VISHAY RES PROD VISHAY INTERTECH	MALVERN	PA	19355
19701	MEPCO/ELECTRA CORP	MINERAL WELLS	TX	76067
20940	MICRO-OHM CORP	EL MONTE	CA	91731
24046	TRANSITRON ELECTRONIC CORP	WAKEFIELD	MA	01880
24355	ANALOG DEVICES INC	NORWOOD	MA	02062
24546	CORNING GLASS WORKS (BRADFORD)	BRADFORD	PA	16701
27014	NATIONAL SEMICONDUCTOR CORP	SANTA CLARA	CA	95051
27167	CORNING GLASS WORKS (WILMINGTON)	WILMINGTON	NC	28401
28480	HEWLETT-PACKARD CO CORPORATE HQ	PALO ALTO	CA	94304
29832	TELEDYNE PHILBRICK NEXUS	DEDHAM	MA	02026
29990	AMERICAN TECH CER DIV PHASE IND	HUNTINGTON STA	NY	11746
30983	MEPCO/ELECTRA CORP	SAN DIEGO	CA	92121
32293	INTERSIL INC	CUPERTINO	CA	95014
32997	BOURNS INC TRIMPOT PROD DIV	RIVERSIDE	CA	92507
34335	ADVANCED MICRO DEVICES INC	SUNNYVALE	CA	94086
34649	INTEL CORP	MOUNTAIN VIEW	CA	95051
51642	CENTRE ENGINEERING INC	STATE COLLEGE	PA	16801
52648	PLESSEY SEMICONDUCTORS	SANTA ANA	CA	92705
52763	STETTNER-TRUSH INC	CAZENOVIA	NY	13035
56289	SPRAGUE ELECTRIC CO	NORTH ADAMS	MA	01247
71400	BUSSMAN MFG DIV OF MCRAW-EDISON CO	ST LOUIS	MO	63107
72136	ELECTRO MOTIVE CORP SUB IEC	WILLIMANTIC	CT	06226
74970	JOHNSON E F CO	WASECA	MN	56093
75042	TRW INC PHILADELPHIA DIV	PHILADELPHIA	PA	19108
75915	LITTELFUSE INC	DES PLAINES	IL	60016
84411	TRW CAPACITOR DIV	OGALLALA	NE	69153
91506	AUGAT INC	ATTLEBORO	MA	02703

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1T1	9100-4009	0	1	TRANSFORMER	28480	9100-4009
A1V1	5083-4191	9	1	CRT-P31 PHOSPHOR COATING	28480	5083-4191
A1A1	85662-60001	1	1	KEYBOARD ASSEMBLY (INCLUDES #1 & #9)	28480	85662-60001
A1A1C1	0160-4084	8	1	CAPACITOR=FXD ,1UF +-20% 50VDC CER	28480	0160-4084
A1A1DS1	1990-0485	5	1	LED=VISIBLE LUM=INT=800UCD IF=30MA=MAX	28480	5082-4984
A1A1DS2=	1990-0487	7	17	LED=VISIBLE LUM=INT=1MCD IF=20MA=MAX	28480	5082-4584
A1A1DS18						
A1A1J1	1251-5549	6	1	CONNECTOR 50-PIN M POST TYPE	28480	1251-5549
A1A1Q1	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A1Q2	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A1R1	2100-3587	0	1	RESISTOR=VAR CONTROL CP 2K 10% 10CW	28480	2100-3587
A1A1R2	2100-2452	6	3	RESISTOR=TRMR 25K 20% CCP TOP=ADJ 1=TRN	28480	2100-2452
A1A1R3	2100-2452	6		RESISTOR=TRMR 25K 20% CCP TOP=ADJ 1=TRN	28480	2100-2452
A1A1R4	0698-3157	3	1	RESISTOR 19.6K 1% ,125W F TC=0+-100	24546	C4=1/8-T0-1962-F
A1A1R5	0757-0420	3	1	RESISTOR 750 1% ,125W F TC=0+-100	24546	C4=1/8-T0-751-F
A1A1R6	0757-0442	9	2	RESISTOR 10K 1% ,125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A1A1R7	0757-0442	9		RESISTOR 10K 1% ,125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A1A1R8	2100-2452	6		RESISTOR=TRMR 25K 20% CCP TOP=ADJ 1=TRN	28480	2100-2452
A1A1R9	0698-3444	1	3	RESISTOR 316 1% ,125W F TC=0+-100	24546	C4=1/8-T0-316R-F
A1A1R10	0698-3161	9	2	RESISTOR 38.3K 1% ,125W F TC=0+-100	24546	C4=1/8-T0-3832-F
A1A1R11	0698-3161	9		RESISTOR 38.3K 1% ,125W F TC=0+-100	24546	C4=1/8-T0-3832-F
A1A1R12	2100-3647	3	1	RESISTOR=VAR CONTROL CP 5K 10% LIN	28480	2100-3647
A1A1R13	0698-3444	1		RESISTOR 316 1% ,125W F TC=0+-100	24546	C4=1/8-T0-316R-F
A1A1R14	0698-3444	1		RESISTOR 316 1% ,125W F TC=0+-100	24546	C4=1/8-T0-316R-F
A1A1R15	0757-0401	0	1	RESISTOR 100 1% ,125W F TC=0+-100	24546	C4=1/8-T0-101-F
A1A1S1=						
A1A1S28	5060-9436	7	28	PUSHBUTTON SWITCH P.C. MOUNT	28480	5060-9436
A1A1U1	1820-1730	6	2	IC FF TTL LS D-TYPE POS=EDGE=TRIG COM	01295	8N74LS273N
A1A1U2	1820-1730	6		IC FF TTL LS D-TYPE POS=EDGE=TRIG COM	01295	8N74LS273N
A1A1U3	1810-0203	5	2	NETWORK-RES 8-PIN=5IP ,1-PIN=SPCG	11236	750-81-R470
A1A1U4	1810-0203	5		NETWORK-RES 8-PIN=5IP ,1-PIN=SPCG	11236	750-81-R470
A1A1XDS1=						
A1A1XDS15	1200-0010	9	16	SOCKET=TUBE 2=CONT	28480	1200-0010
A1A1XDS16	1200-0010	9		SOCKET=TUBE 2=CONT	28480	1200-0010

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A2	85662-60100	1	1	BOARD ASSEMBLY, Z-AXIS AMPLIFIER	28480	85662-60100
A1A2C1	0180-0374	3	2	CAPACITOR-FXD 10UF+-10% 20VDC 1A	56289	150D106X9020B2
A1A2C2	0180-0374	3		CAPACITOR-FXD 10UF+-10% 20VDC 1A	56289	150D106X9020B2
A1A2C3	0160-3670	6	10	CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C4	0160-4084	8	5	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A2C5	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A2C6	0160-2204	0	2	CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A1A2C7	0160-2308	5	1	CAPACITOR-FXD 36PF +-5% 300VDC MICA	28480	0160-2308
A1A2C8	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C9	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C10	0121-0474	0	1	CAPACITOR-V TRMR-PSTN .3-1.5PF 600V	28480	0121-0474
A1A2C11	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C12	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C13	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C14	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A2C15	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A2C16	0180-0269	5	1	CAPACITOR-FXD 1UF+50-10% 150VDC AL	56289	30D105G150BA2
A1A2C17	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A2C18	0160-2204	0		CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A1A2C19	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C20	0160-2238	0	1	CAPACITOR-FXD 1.5PF +-2.5PF 500VDC CER	28480	0160-2238
A1A2C21	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C22	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2C23	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A2CR1	1901-0535	9	1	DIODE-SCHOTTKY	28480	1901-0535
A1A2CR2	1901-0096	7	2	DIODE-SWITCHING 120V 50MA 100NS	28480	1901-0096
A1A2CR3	1901-0028	5	4	DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A2CR4	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A2CR5	1901-0096	7		DIODE-SWITCHING 120V 50MA 100NS	28480	1901-0096
A1A2CR6	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A2CR7	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A2L1	9140-0210	1	3	COIL-MLD 100UH 5% Q#50 .155DX.375LG-NOM	28480	9140-0210
A1A2L2	9140-0210	1		COIL-MLD 100UH 5% Q#50 .155DX.375LG-NOM	28480	9140-0210
A1A2L3	9140-0210	1		COIL-MLD 100UH 5% Q#50 .155DX.375LG-NOM	28480	9140-0210
A1A2Q1	1853-0232	0	2	TRANSISTOR PNP SI TO-39 PD=1W FT=200MHZ	28480	1853-0232
A1A2Q2	1854-0419	7	2	TRANSISTOR NPN SI TO-39 PD=1W FT=200MHZ	28480	1854-0419
A1A2Q3	1853-0232	0		TRANSISTOR PNP SI TO-39 PD=1W FT=200MHZ	28480	1853-0232
A1A2Q4	1853-0007	7	4	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A2Q5	1854-0404	0	8	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2Q6	1854-0419	7		TRANSISTOR NPN SI TO-39 PD=1W FT=200MHZ	28480	1854-0419
A1A2Q7	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2Q8	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2Q9	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A2Q10	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A2Q11	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A2Q12	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2Q13	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2Q14	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2Q15	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2Q16	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A2R1	0757-0394	0	8	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1=F
A1A2R2	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1=F
A1A2R3	0757-0442	9	2	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A1A2R4	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1=F
A1A2R5	2100-3351	6	2	RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	28480	2100-3351
A1A2R6	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1=F
A1A2R7	0757-0200	7	2	RESISTOR 5.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5621=F
A1A2R8	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511K=F
A1A2R9	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100 *FACTORY SELECTED PART	24546	C4=1/8-T0=4221=F
A1A2R10	0757-0441	8	1	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4=1/8-T0=8251=F
A1A2R11	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611=F
A1A2R12	0757-0443	0	2	RESISTOR 11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1102=F
A1A2R13	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001=F
A1A2R14	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001=F
A1A2R15	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A1A2R16	0698-0084	9	3	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151=F
A1A2R17	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001=F
A1A2R18	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151=F
A1A2R19	0757-0421	4	2	RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0=825R=F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A2R20	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1621-F
A1A2R21	0757-0443	0		RESISTOR 11K 1% .125W F TC=0+-100	24546	C4=1/A-T0=1102-F
A1A2R22	2100-3207	1	1	RESISTOR-TRMR 5K 10% C SIDE-ADJ 1-TRN	28480	2100-3207
A1A2R23	0698-3152	8	2	RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3481-F
A1A2R24	0698-3416	7	2	RESISTOR 21.5K 1% .5W F TC=0+-100	28480	0698-3416
A1A2R25	0757-0841	2	2	RESISTOR 12.1K 1% .5W F TC=0+-100	28480	0757-0841
A1A2R26	0698-3151	7	2	RESISTOR 2.87K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2871-F
A1A2R27	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A1A2R28	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A1A2R29	0757-0819	4	2	RESISTOR 909 1% .5W F TC=0+-100	28480	0757-0819
A1A2R30	2100-3351	6		RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	28480	2100-3351
A1A2R31	2100-3353	8	1	RESISTOR-TRMR 20K 10% C SIDE-ADJ 1-TRN	32997	3386X=Y46=203
A1A2R32	2100-3355	0	1	RESISTOR-TRMR 100K 10% C SIDE-ADJ 1-TRN	28480	2100-3355
A1A2R33	0698-3156	4	1	RESISTOR 23.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2372-F
A1A2R34	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A1A2R35	2100-3354	9	2	RESISTOR-TRMR 50K 10% C SIDE-ADJ 1-TRN	28480	2100-3354
A1A2R36	2100-3354	9		RESISTOR-TRMR 50K 10% C SIDE-ADJ 1-TRN	28480	2100-3354
A1A2R37	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A1A2R38	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196R-F
A1A2R39	0757-0274	5	1	RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1213-F
A1A2R40	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196R-F
A1A2R41	0757-0200	7		RESISTOR 5.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5621-F
A1A2R42	0757-0421	4		RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0=825R-F
A1A2R43	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A2R44	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A1A2R45	0698-3152	8		RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3481-F
A1A2R46	0698-3416	7		RESISTOR 21.5K 1% .5W F TC=0+-100	28480	0698-3416
A1A2R47	0757-0841	2		RESISTOR 12.1K 1% .5W F TC=0+-100	28480	0757-0841
A1A2R48	0698-3151	7		RESISTOR 2.87K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2871-F
A1A2R49	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A1A2R50	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A1A2R51	0757-0819	4		RESISTOR 909 1% .5W F TC=0+-100	28480	0757-0819
A1A2TP1	0360-0535	0	3	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A2TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A2TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A2VR1	1902-3333	3	1	DIODE-ZNR 46.4V 5% DO-7 PD=.4W TC=+.081%	28480	1902-3333
A1A2VR2	1902-3357	1	1	DIODE-ZNR 56.2V 5% DO-7 PD=.4W TC=+.081%	28480	1902-3357
A1A2VR3	1902-0049	2	1	DIODE-ZNR 6.19V 5% DO-7 PD=.4W TC=+.022%	28480	1902-0049
A1A2 MISCELLANEOUS						
	5000-9043	6	1	PIN/P.C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	EXTRACTOR, P.C. BOARD	28480	5040-6843

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A3	85662-60059	9	1	BOARD ASSEMBLY, HIGH VOLTAGE REGULATOR	28480	85662-60059
A1A3C1	0160-4148	5		CAPACITOR-FXD .033UF +-20% 6KVDC	56289	430P333060
A1A3C2	0160-2264	2		CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A1A3C3	0160-4148	5		CAPACITOR-FXD .033UF +-20% 6KVDC	56289	430P333060
A1A3C4	0160-3960	7		CAPACITOR-FXD 1000PF +-20% 8KVDC	28480	0160-3960
A1A3C5	0160-3960	7		CAPACITOR-FXD 1000PF +-20% 8KVDC	28480	0160-3960
A1A3C6	0160-0678	8		CAPACITOR-FXD .01UF +-20% 6KVDC	28480	0160-0678
A1A3C7	0160-0678	8		CAPACITOR-FXD .01UF +-20% 6KVDC	28480	0160-0678
A1A3C8	0160-0543	6		CAPACITOR-FXD 4700PF +-20% 4KVDC	28480	0160-0543
A1A3C9	0160-2264	2		CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A1A3C10	0160-0543	6		CAPACITOR-FXD 4700PF +-20% 4KVDC	28480	0160-0543
A1A3C11	0160-0543	6		CAPACITOR-FXD 4700PF +-20% 4KVDC	28480	0160-0543
A1A3C12	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A1A3C13	0160-0543	6		CAPACITOR-FXD 4700PF +-20% 4KVDC	28480	0160-0543
A1A3C14	0160-0269	5		CAPACITOR-FXD 1UF+50-10% 150VDC AL	56289	30D105G150B42
A1A3CR1	1901-0683	8	1	DIODE-PWR RECT 10KV 5MA 250NS	28480	1901-0683
A1A3CR2	1901-0028	5	8	DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3CR3	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3CR4	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3CR5	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3CR6	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3CR7	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3CR8	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3CR9	1901-0028	5		DIODE-PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A3R1	0684-1041	1	1	RESISTOR 100K 10% .25W FC TC=-400/+800	01121	CB1041
A1A3R2	0687-3941	0	2	RESISTOR 390K 10% .5W CC TC=0+882	01121	EB3941
A1A3R3	0687-4721	6	1	RESISTOR 4.7K 10% .5W CC TC=0+647	01121	EB4721
A1A3R4	0698-8018	5	1	RESISTOR 30M 1% 3W C TC=0+-100	03888	PVC175-3-T0-3004-F
A1A3R5	0684-1021	7	6	RESISTOR 1K 10% .25W FC TC=-400/+600	01121	CB1021
A1A3R6	0684-1021	7		RESISTOR 1K 10% .25W FC TC=-400/+600	01121	CB1021
A1A3R7	0686-1065	3	2	RESISTOR 10M 5% .5W CC TC=0+1059	01121	EB1065
A1A3R8	0684-1021	7		RESISTOR 1K 10% .25W FC TC=-400/+600	01121	CB1021
A1A3R9	0684-1021	7		RESISTOR 1K 10% .25W FC TC=-400/+600	01121	CB1021
A1A3R10	0684-1051	3	2	RESISTOR 1M 10% .25W FC TC=-800/+900	01121	CB1051
A1A3R11	0687-2221	7	1	RESISTOR 2.2K 10% .5W CC TC=0+647	01121	EB2221
A1A3R12	0687-1001	9	1	RESISTOR 10 10% .5W CC TC=0+412	01121	EB1001
A1A3R13	0698-8992	4	1	RESISTOR 8M 2% 1W C TC=0+-250	28480	0698-8992
A1A3R14	2100-3626	8	1	RESISTOR-TRMR 2M 20% C SIDE-ADJ 1-TRN	28480	2100-3626
A1A3R15	0698-8993	5	1	RESISTOR 14M 2% 1W C TC=0+-250	28480	0698-8993
A1A3R16	0684-1011	5	1	RESISTOR 100 10% .25W FC TC=-400/+500	01121	CB1011
A1A3R17	0687-3941	0		RESISTOR 390K 10% .5W CC TC=0+882	01121	EB3941
A1A3R18	0684-1031	9	1	RESISTOR 10K 10% .25W FC TC=-400/+700	01121	CB1031
A1A3R19	0686-1065	3		RESISTOR 10M 5% .5W CC TC=0+1059	01121	EB1065
A1A3R20	0684-1021	7		RESISTOR 1K 10% .25W FC TC=-400/+600	01121	CB1021
A1A3R21	0684-1021	7		RESISTOR 1K 10% .25W FC TC=-400/+600	01121	CB1021
A1A3R22	0684-1051	3		RESISTOR 1M 10% .25W FC TC=-800/+900	01121	CB1051
A1A3R23	0687-2231	9	1	RESISTOR 22K 10% .5W CC TC=0+765	01121	EB2231
A1A3R24	0687-6801	7	1	RESISTOR 68 10% .5W CC TC=0+412	01121	EB6801
A1A3T1	01332-61103	1	1	TRANSFORMER ASSEMBLY, HIGH VOLTAGE	28480	01332-61103
A1A3TP1	0360-0535	0	3	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A3TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A3TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A3TP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A3TP5	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A3V1	2140-0018	0	2	LAMP-GLOW A9A-C 90/58VDC 700UA T-2-BULB	0046G	AGA-C
A1A3V2	2140-0018	0		LAMP-GLOW A9A-C 90/58VDC 700UA T-2-BULB	0046G	AGA-C
A1A3VR1	1902-0182	4	1	DIODE-ZNR 20.5V 5% DO-7 PD=.4W TC=+.072%	28480	1902-0182
A1A3VR2	1902-0197	1	1	DIODE-ZNR 82.5V 5% DO-15 PD=1W TC=+.082%	28480	1902-0197

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A4	85662-60057	7	1	BOARD ASSEMBLY, X-DEFLECTION AMPLIFIER	28480	85662-60057
A1A4C1	0180-0374	3	2	CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D10ex902082
A1A4C2	0180-0374	3		CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D10ex902082
A1A4C3	0160-4084	8	6	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A4C4	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A4C5	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A4C6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A4C7	0160-3670	6	3	CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A4C8	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A4C9	0160-3533	0	1	CAPACITOR-FXD 470PF +-5% 300VDC MICA	28480	0160-3533
A1A4C10	0121-0474	0	2	CAPACITOR-V TRMR-PSTN .3-1.5PF 600V	28480	0121-0474
A1A4C11	0121-0474	0		CAPACITOR-V TRMR-PSTN .3-1.5PF 600V	28480	0121-0474
A1A4C12	0160-2055	9	4	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A1A4C13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A1A4C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A1A4C15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A1A4C16	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A4C17	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A4C18	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A4CR1	1901-0040	1	2	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1A4CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1A4E1	1251-0600	0	2	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ 30	28480	1251-0600
A1A4E2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ 30	28480	1251-0600
A1A4L1	9140-0210	1	3	COIL-MLD 100UH 5% Q=50 .155DX.375LG-NOM	28480	9140-0210
A1A4L2	9140-0210	1		COIL-MLD 100UH 5% Q=50 .155DX.375LG-NOM	28480	9140-0210
A1A4L3	9140-0210	1		COIL-MLD 100UH 5% Q=50 .155DX.375LG-NOM	28480	9140-0210
A1A4Q1	1853-0232	0	2	TRANSISTOR PNP SI TO-39 PD=1W FT=200MHZ	28480	1853-0232
A1A4Q2	1854-0523	4	2	TRANSISTOR NPN SI TO-39 PD=1W FT=150MHZ	28480	1854-0523
A1A4Q3	1854-0523	4		TRANSISTOR NPN SI TO-39 PD=1W FT=150MHZ	28480	1854-0523
A1A4Q4	1853-0232	0		TRANSISTOR PNP SI TO-39 PD=1W FT=200MHZ	28480	1853-0232
A1A4Q5	1853-0007	7	7	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A4Q6	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A4Q7	1854-0404	0	4	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A4Q8	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A4Q9	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A4Q10	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A4Q11	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A4Q12	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A4Q13	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A4Q14	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A4Q15	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A4R1	0757-0438	3	3	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A1A4R2	0757-0394	0	3	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0-51R1-F
A1A4R3	0698-3150	6	2	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2371-F
A1A4R4	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2371-F
A1A4R5	0698-3155	1	2	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0-4641-F
A1A4R6	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0-51R1-F
A1A4R7	2100-3353	8	1	RESISTOR-TRMR 20K 10% C SIDE-ADJ 1-TRN	32997	3386X-Y46=203
A1A4R8	0757-0401	0	4	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A1A4R9	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A1A4R10	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A1A4R11	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A1A4R12	0757-0428	1	2	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1621-F
A1A4R13	0757-0428	1		RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1621-F
A1A4R14	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0-7501-F
A1A4R15	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1212-F
A1A4R16	0698-0084	9	4	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2151-F
A1A4R17	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2151-F
A1A4R18	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2151-F
A1A4R19	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2151-F
A1A4R20	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0-4641-F
A1A4R21	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1471-F
A1A4R22	0757-0460	1	2	RESISTOR 61.9K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6192-F
A1A4R23	0757-0460	1		RESISTOR 61.9K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6192-F
A1A4R24	0698-3153	9	3	RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3831-F
A1A4R25	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3831-F
A1A4R26	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0-825H-F
A1A4R27	2100-3273	1	1	RESISTOR-TRMR 2K 10% C SIDE-ADJ 1-TRN	28480	2100-3273
A1A4R28	2100-3352	7	1	RESISTOR-TRMR 1K 10% C SIDE-ADJ 1-TRN	28480	2100-3352
A1A4R29	0698-3415	6	2	RESISTOR 19.6K 1% .5W F TC=0+-100	28480	0698-3415
A1A4R30	0698-3415	6		RESISTOR 19.6K 1% .5W F TC=0+-100	28480	0698-3415

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A4R31	0757-0439	4	2	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6811-F
A1A4R32	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6811-F
A1A4R33	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A1A4R34	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A1A4R35	0757-0851	4	2	RESISTOR 43.2K 1% .5W F TC=0+-100	28480	0757-0851
A1A4R36	0757-0851	4		RESISTOR 43.2K 1% .5W F TC=0+-100	28480	0757-0851
A1A4R37	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A4R38	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A4R39	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A4R40	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A4R41	0757-0873	0	2	RESISTOR 1.62K 1% .5W F TC=0+-100	28480	0757-0873
A1A4R42	0757-0873	0		RESISTOR 1.62K 1% .5W F TC=0+-100	28480	0757-0873
A1A4R43	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3831-F
A1A4R44	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0-51R1-F
A1A4TP1	0360-0535	0	3	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A4TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A4TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A4U1	1826-0021	8	1	IC OP AMP T0-99	27014	LM310H
				A1A4 MISCELLANEOUS PARTS		
	5000-9043	6	1	PIN,P.C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	EXTRACTOR, P.C. BOARD	28480	5040-6843

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A5	A5662-60057	7	1	BOARD ASSEMBLY, Y-DEFLECTION AMPLIFIER	28480	85662-60057
A1A5C1	0180-0374	3	2	CAPACITOR-FXD .10UF +-10% 20VDC TA	56289	1500106X9020B2
A1A5C2	0180-0374	3		CAPACITOR-FXD .10UF +-10% 20VDC TA	56289	1500106X9020B2
A1A5C3	0160-4084	8	6	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A5C4	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A5C5	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A5C6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A5C7	0160-3670	6	3	CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A5C8	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A5C9	0160-3533	0	1	CAPACITOR-FXD .470PF +-5% 300VDC MICA	28480	0160-3533
A1A5C10	0121-0474	0	2	CAPACITOR-V TRMR-PSTN .3-1.5PF 600V	28480	0121-0474
A1A5C11	0121-0474	0		CAPACITOR-V TRMR-PSTN .3-1.5PF 600V	28480	0121-0474
A1A5C12	0160-2055	9	4	CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1A5C13	0160-2055	9		CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1A5C14	0160-2055	9		CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1A5C15	0160-2055	9		CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1A5C16	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A5C17	0160-3670	6		CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A5C18	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A5CR1	1901-0040	1	2	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1A5CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1A5E1	1251-0600	0	2	CONNECTOR-SGL CONT PIN 1,14-MM-BSC-S2 SQ	28480	1251-0600
A1A5E2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-S2 SQ	28480	1251-0600
A1A5L1	9140-0210	1	3	COIL-MLD 100UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0210
A1A5L2	9140-0210	1		COIL-MLD 100UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0210
A1A5L3	9140-0210	1		COIL-MLD 100UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0210
A1A5Q1	1853-0232	0	2	TRANSISTOR PNP SI TO-39 PD=1W FT=200MHZ	28480	1853-0232
A1A5Q2	1854-0523	4	2	TRANSISTOR NPN SI TO-39 PD=1W FT=150MHZ	28480	1854-0523
A1A5Q3	1854-0523	4		TRANSISTOR NPN SI TO-39 PD=1W FT=150MHZ	28480	1854-0523
A1A5Q4	1853-0232	0		TRANSISTOR PNP SI TO-39 PD=1W FT=200MHZ	28480	1853-0232
A1A5Q5	1853-0007	7	7	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A5Q6	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A5Q7	1854-0404	0	4	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A5Q8	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A5Q9	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A5Q10	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A5Q11	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A5Q12	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A5Q13	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A5Q14	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A5Q15	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A1A5R1	0757-0438	3	3	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A1A5R2	0757-0394	0	3	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A1A5R3	0698-3150	6	2	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2371-F
A1A5R4	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2371-F
A1A5R5	0698-3155	1	2	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A1A5R6	0757-0394	0		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A1A5R7	2100-3353	8	1	RESISTOR-TRMR 2K 10% C SIDE-ADJ 1-TRN	32997	3386X-Y46=203
A1A5R8	0757-0401	0	4	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A1A5R9	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A1A5R10	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A1A5R11	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A1A5R12	0757-0428	1	2	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1621-F
A1A5R13	0757-0428	1		RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1621-F
A1A5R14	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0=7501-F
A1A5R15	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1212-F
A1A5R16	0698-0084	9	4	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A1A5R17	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A1A5R18	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A1A5R19	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A1A5R20	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A1A5R21	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1471-F
A1A5R22	0757-0460	1	2	RESISTOR 61.9K 1% .125W F TC=0+-100	24546	C4=1/8-T0=6192-F
A1A5R23	0757-0460	1		RESISTOR 61.9K 1% .125W F TC=0+-100	24546	C4=1/8-T0=6192-F
A1A5R24	0698-3153	9	3	RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3831-F
A1A5R25	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3831-F
A1A5R26	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0=825R-F
A1A5R27	2100-3273	1	1	RESISTOR-TRMR 2K 10% C SIDE-ADJ 1-TRN	28480	2100-3273
A1A5R28	2100-3352	7	1	RESISTOR-TRMR 1K 10% C SIDE-ADJ 1-TRN	28480	2100-3352
A1A5R29	0698-3415	6	2	RESISTOR 19.6K 1% .5W F TC=0+-100	28480	0698-3415
A1A5R30	0698-3415	6		RESISTOR 19.6K 1% .5W F TC=0+-100	28480	0698-3415

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A5P31	0757-0439	4	2	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6811-F
A1A5P32	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6811-F
A1A5P33	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A1A5P34	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A1A5P35	0757-0851	4	2	RESISTOR 43.2K 1% .5W F TC=0+-100	28480	0757-0851
A1A5P36	0757-0851	4		RESISTOR 43.2K 1% .5W F TC=0+-100	28480	0757-0851
A1A5P37	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A5P38	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A5P39	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A5P40	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0-10R0-F
A1A5P41	0757-0873	0	2	RESISTOR 1.62K 1% .5W F TC=0+-100	28480	0757-0873
A1A5P42	0757-0873	0		RESISTOR 1.62K 1% .5W F TC=0+-100	28480	0757-0873
A1A5P43	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3831-F
A1A5P44	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0-51R1-F
A1A5TP1	0360-0535	0	3	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A5TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A5TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A1A5U1	1826-0021	8	1	IC OP AMP T0-99	27014	LM310H
				A1A5 MISCELLANEOUS PARTS		
	5000-9043	6	1	PIN:P.C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	EXTRACTOR, P.C. BOARD	28480	5040-6843

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A6	85662-60101	2	1	BOARD ASSEMBLY, +/-15V REGULATOR	28480	85662-60101
A1A6C1	0180-2205	3	1	CAPACITOR=FXD .33UF+/-10% 35VDC TA	56289	150D334X9035A2
A1A6C2	0180-0116	1	1	CAPACITOR=FXD .68UF+/-10% 35VDC TA	56289	150D685X9035B2
A1A6C3	0160-2199	2	2	CAPACITOR=FXD 30PF +/-5% 300VDC MICA	28480	0160-2199
A1A6C4	0180-1746	5	3	CAPACITOR=FXD 15UF+/-10% 20VDC TA	56289	150D156X9020B2
A1A6C5	0180-0228	6	1	CAPACITOR=FXD 22UF+/-10% 15VDC TA	56289	150D226X9015B2
A1A6C6	0180-1746	5		CAPACITOR=FXD 15UF+/-10% 20VDC TA	56289	150D156X9020B2
A1A6C7	0180-0197	8	1	CAPACITOR=FXD 2.2UF+/-10% 20VDC TA	56289	150D225X9020A2
A1A6C8	0160-3456	6	1	CAPACITOR=FXD 1000PF +/-10% 1KVDC CER	28480	0160-3456
A1A6C9	0160-2199	2		CAPACITOR=FXD 30PF +/-5% 300VDC MICA	28480	0160-2199
A1A6C10	0180-0291	3	1	CAPACITOR=FXD 1UF+/-10% 35VDC TA	56289	150D105X9035A2
A1A6C11	0180-1746	5		CAPACITOR=FXD 15UF+/-10% 20VDC TA	56289	150D156X9020B2
A1A6C12	0180-0141	2	1	CAPACITOR=FXD 50UF+75-10% 50VDC AL	56289	30D506G050DD2
A1A6C13	0160-0164	7	1	CAPACITOR=FXD .039UF +/-10% 200VDC POLYE	28480	0160-0164
A1A6C14	0160-4084	8	3	CAPACITOR=FXD .1UF +/-20% 50VDC CER	28480	0160-4084
A1A6C15	0160-0166	9	1	CAPACITOR=FXD .068UF +/-10% 200VDC POLYE	28480	0160-0166
A1A6C16	0160-4084	8		CAPACITOR=FXD .1UF +/-20% 50VDC CER	28480	0160-4084
A1A6C17	0160-4084	8		CAPACITOR=FXD .1UF +/-20% 50VDC CER	28480	0160-4084
A1A6CR1				NOT ASSIGNED		
A1A6CR2	1901-0033	2	5	DIODE=GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A6CR3	1902-3224	1	2	DIODE=ZNR 17.8V 5% DO-7 PD=.4W TC=+.067%	28480	1902-3224
A1A6CR4	1884-0018	5	2	THYRISTOR=SCR 2N4186 VRRM=200	04713	2N4186
A1A6CR5				NOT ASSIGNED		
A1A6CR6	1901-0033	2		DIODE=GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A6CR7	1902-3224	1		DIODE=ZNR 17.8V 5% DO-7 PD=.4W TC=+.067%	28480	1902-3224
A1A6CR8	1901-0033	2		DIODE=GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A6CR9	1884-0018	5		THYRISTOR=SCR 2N4186 VRRM=200	04713	2N4186
A1A6CR10	1901-0033	2		DIODE=GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A6CR11	1901-0200	5	1	DIODE=PWR RECT 100V 1.5A	28480	1901-0200
A1A6CR12				NOT ASSIGNED		
A1A6CR13	1901-0028	5	2	DIODE=PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A6CR14	1901-0028	5		DIODE=PWR RECT 400V 750MA DO-29	28480	1901-0028
A1A6CR15	1901-0040	1	2	DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1A6CR16	1901-0040	1		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1A6CR17	1902-0556	6	1	DIODE=ZNR 20V 5% DO-15 PD=.1W TC=+.073%	28480	1902-0556
A1A6CR18	1901-0033	2		DIODE=GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A6DS1	1990-0487	7	2	LED=VISIBLE LUM=INT=1MCD IF=20MA-MAX	28480	5082-4584
A1A6DS2	1990-0487	7		LED=VISIBLE LUM=INT=1MCD IF=20MA-MAX	28480	5082-4584
A1A6F1	2110-0083	6	1	FUSE 2.5A 250V FAST-BLO 1.25X.25 UL IEC	28480	2110-0083
A1A6F2	2110-0002	9	1	FUSE 2A 250V FAST-BLO 1.25X.25 UL IEC	75915	312002
A1A6F3	2110-0007	4	1	FUSE 1A 250V SLO-BLO 1.25X.25 UL IEC	75915	313001
A1A6L1	9140-0171	3	1	COIL=MLO 40UH 10% Q=20 .298DX.968LG=NHM	28480	9140-0171
A1A6L2	9100-1641	0	1	COIL=MLO 240UH 5% Q=65 .155DX.375LG=NHM	28480	9100-1641
A1A6MP4	1480-0073	6		PIN=ROLL .062-IN-DIA .25-IN-LG BE=CU	28480	1480-0073
A1A6MP11	0380-0886	6	4	STANDOFF, .1" LG, 4-40 THREAD	00000	ORDER BY DESCRIPTION
A1A6Q1	1853-0281	9	3	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A1A6Q2	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A1A6Q3	1854-0477	7	2	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A1A6Q4	1854-0019	3	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A1A6Q5	1854-0611	1	2	TRANSISTOR NPN 2N6055 SI DARL TO-3	04713	2N6055
A1A6Q6	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A1A6Q7	1854-0518	7	1	TRANSISTOR NPN 2N5877 SI TO-3 PD=150W	04713	2N5877
A1A6Q8	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A1A6Q9	1854-0611	1		TRANSISTOR NPN 2N6055 SI DARL TO-3	04713	2N6055
A1A6Q10	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A1A6R1	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+/-100	24546	C4-1/8-T0-1002-F
A1A6R2	0757-0403	2	1	RESISTOR 121 1% .125W F TC=0+/-100	24546	C4-1/8-T0-121R-F
A1A6R3	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+/-100	24546	C4-1/8-T0-51R1-F
A1A6R4	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC=0+/-100	24546	C4-1/8-T0-2371-F
A1A6R5	0698-3442	9	1	RESISTOR 237 1% .125W F TC=0+/-100	24546	C4-1/8-T0-237R-F
A1A6R6	0757-1094	9	2	RESISTOR 1.47K 1% .125W F TC=0+/-100	24546	C4-1/8-T0-1471-F
A1A6R7	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+/-100	24546	C4-1/8-T0-1002-F
A1A6R8	0698-3247	2	1	RESISTOR 4.53K .25% .125W F TC=0+/-50	28480	0698-3247
A1A6R9	2100-3095	5	1	RESISTOR=TRMR 200 10% C SIDE=ADJ 17=TRN	02111	43P201
A1A6R10	0698-6835	0	1	RESISTOR 3.16K .5% .125W F TC=0+/-50	24546	NC55-1/8-T2-3161-D
A1A6R11	0811-1669	0	2	RESISTOR 1.8 5% 2W PW TC=0+/-400	75042	BWM2-1R8-J
A1A6R12	0757-0280	3	2	RESISTOR 1K 1% .125W F TC=0+/-100	24546	C4-1/8-T0-1001-F
A1A6R13	0757-0424	7	1	RESISTOR 1.1K 1% .125W F TC=0+/-100	24546	C4-1/8-T0-1101-F
A1A6R14	0683-0275	9	2	RESISTOR 2.7 5% .25W FC TC=400/+500	01121	C827G5
A1A6R15	0698-3444	1	2	RESISTOR 316 1% .125W F TC=0+/-100	24546	C4-1/8-T0-316R-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A6R16	0757-0346	2	2	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A1A6R17	0757-0317	7	2	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F
A1A6R18	0811-1669	0		RESISTOR 1.8 5% 2W PW TC=0+-400	75042	BWM2=1R8-J
A1A6R19	0698-7794	2	2	RESISTOR 10K .25% .125W F TC=0+-100	19701	MF4C1/8-T0=1002-C
A1A6R20	0698-7794	2		RESISTOR 10K .25% .125W F TC=0+-100	19701	MF4C1/8-T0=1002-C
A1A6R21	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4=1/8-T0=316R-F
A1A6R22	0757-0418	9	2	RESISTOR 619 1% .125W F TC=0+-100	24546	C4=1/8-T0=619R-F
A1A6R23	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A1A6R24	0757-0276	7	1	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4=1/8-T0=6192-F
A1A6R25	0757-0418	9		RESISTOR 619 1% .125W F TC=0+-100	24546	C4=1/8-T0=619R-F
A1A6R26	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A6R27	0757-0317	7		RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F
A1A6R28	0811-1661	2	1	RESISTOR .39 5% 2W PW TC=0+-800	75042	BWM2=.39/100-J
A1A6R29	0683-0275	9		RESISTOR 2.7 5% .25W FC TC=400/+500	01121	CB27G5
A1A6R30	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A1A6R31	0698-3243	8	1	RESISTOR 178K 1% .125W F TC=0+-100	24546	C4=1/8-T0= 1783 -F
A1A6R32	2100-3064	8	1	RESISTOR-TMR 50K 10% C SIDE=ADJ 17-TRN	01885	43P803
A1A6R33	0757-0465	8	2	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A1A6R34	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A1A6R35	0683-2265	1	1	RESISTOR 22M 5% .25W FC TC=-900/+1200	01121	CB2265
A1A6R36	0698-3459	8	1	RESISTOR 383K 1% .125W F TC=0+-100	28480	0698-3459
A1A6R37	0757-0403	2	1	RESISTOR 121 1% .125W F TC=0+-100	24546	C4=1/8-T0=121R-F
A1A6R38	0698-3446	3	2	RESISTOR 383 1% .125W F TC=0+-100	24546	C4=1/8-T0=383R-F
A1A6R39	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A6R40	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A6R41	0698-3446	3		RESISTOR 383 1% .125W F TC=0+-100	24546	C4=1/8-T0=383R-F
A1A6R42	0757-0290	5	2	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A1A6R43	0698-4405	6	1	RESISTOR 107 1% .125W F TC=0+-100	24546	C4=1/8-T0=107H-F
A1A6R44	0757-1094	9		RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1471-F
A1A6R45	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A1A6R46	0837-0126	6	1	THERMISTOR DISC 1K-OHM TC=-4.4%/C-DEG	28480	0837-0126
A1A6R47				NOT ASSIGNED		
A1A6R48	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4221-F
A1A6R49	0757-0816	1	1	RESISTOR 681 1% .5W F TC=0+-100	28480	0757-0816
A1A6R50	0757-0462	3	1	RESISTOR 75K 1% .125W F TC=0+-100	28480	0757- 0462
A1A6R51	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A6R52	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A6TP1	1251-0600	0	7	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A1A6TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A1A6TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A1A6TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A1A6TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A1A6TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A1A6TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A1A6U1	1820-0223	0	2	IC 301 OP AMP TO-99	04713	MLM301AG
A1A6U2	1820-0223	0		IC 301 OP AMP TO-99	04713	MLM301AG
A1A6U3	1826-0167	3	1	IC OP AMP TO-99	01928	CA3094AT
A1A6U4	1826-0026	3	1	IC 311 COMPARATOR TO-99	04713	MLM311G
A1A6VR1	1902-0686	3	1	DIODE-ZNR 1N825 6.2V 2% DO-7 PDE.4W	04713	1N825
A1A6VR2	1902-0554	4	1	DIODE-ZNR 10V 5% DO-15 PD=1W TC=+.06%	28480	1902-0554
A1A6VR3	1902-3263	8	1	DIODE-ZNR 24.9V 2% DO-7 PD=4W TC=+.081%	02037	SZ10839-297
				A1A6 MISCELLANEOUS PARTS		
	4040-0754	1	1	EXTRACTOR-PC BOARD BLU POLYC	28480	4040-0754
	1480-0073	6	1	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A7	85662-00052	2	1	BOARD ASSEMBLY, +100V+5.2V REGULATOR	28480	85662-00052
A1A7C1	0180-0197	8	2	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A1A7C2	0160-3670	6	1	CAPACITOR-FXD .1UF +-20% 200VDC CER	28480	0160-3670
A1A7C3	0160-2199	2	2	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A1A7C4	0180-0228	6	2	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D225X9015B2
A1A7C5	0160-2199	2	2	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A1A7C6	0180-0291	3	1	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A1A7C7	0180-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D225X9015B2
A1A7C8	0180-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A1A7C9	0160-3449	7	1	CAPACITOR-FXD 2000PF +-10% 250VDC CER	28480	0160-3449
A1A7C10	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1A7CR1	1901-0050	3	2	DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A1A7CR2	1901-0050	3	2	DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A1A7CR3	1901-0033	2	2	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A7CR4	1902-0513	5	1	DIODE-ZNR 82.5V 2% DO-15 PD=1W TC=+.082%	28480	1902-0513
A1A7CR5	1902-3256	9	1	DIODE-ZNR 23.7V 5% DO-7 PD=.4W TC=+.076%	28480	1902-3256
A1A7CR6	1901-0033	2	2	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A7CR7	1902-0049	2	1	DIODE-ZNR 6.19V 5% DO-7 PD=.4W TC=+.022%	28480	1902-0049
A1A7CR8	1884-0018	5	1	THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A1A7CR9	1901-0200	5	1	DIODE-PWR RECT 100V 1.5A	28480	1901-0200
A1A7DS1	1990-0487	7	2	LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A1A7DS2	1990-0487	7	2	LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A1A7F1	2110-0010	9	1	FUSE 5A 250V FAST-BLO 1.25X.25 UL IEC	75915	312005
A1A7F2	2110-0004	1	1	FUSE .25A 250V FAST-BLO 1.25X.25 UL IEC	28480	2110-0004
A1A7L1	9100-1641	0	1	COIL-MLD 240UH 5% Q=65 .155DX.375LG-NOM	28480	9100-1641
A1A7Q1	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A7Q2	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A1A7Q3	1854-0019	3	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A1A7Q4	1854-0523	4	1	TRANSISTOR NPN SI TO-39 PD=1W FT=150MHZ	28480	1854-0523
A1A7Q5	1854-0019	3	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A1A7Q6	1854-0618	8	1	TRANSISTOR NPN SI DARL TO-3 PD=150W	04713	MJ3000
A1A7Q7	1853-0414	0	1	TRANSISTOR PNP 2N6423 SI TO-66 PD=35W	28480	1853-0414
A1A7Q8	1854-0311	8	1	TRANSISTOR NPN 2N4240 SI TO-66 PD=35W	01928	2N4240
A1A7R1	0757-0466	7	1	RESISTOR 110K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1103-F
A1A7R2	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A7R3	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A7R4	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A7R5	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196H-F
A1A7R6	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196H-F
A1A7R7	0757-0317	7	2	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F
A1A7R8	0757-0438	3	2	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A1A7R9	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A7R10	0698-7794	2	1	RESISTOR 10K .25% .125W F TC=0+-100	19701	MF4C1/8-T0=1002-C
A1A7R11	0698-8417	8	1	RESISTOR 5.3K .25% .125W F TC=0+-50	19701	MF4C1/8-T2=5301-C
A1A7R12	0757-0418	9	2	RESISTOR 619 1% .125W F TC=0+-100	24546	C4=1/8-T0=619H-F
A1A7R13	0757-0276	7	1	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4=1/8-T0=6192-F
A1A7R14	0757-0438	3	2	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A1A7R15	0757-0274	5	1	RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1213-F
A1A7R16	0698-3427	0	2	RESISTOR 13.3 1% .125W F TC=0+-100	03888	PME55=1/8-T0=13R3-F
A1A7R17	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A1A7R18	0812-0066	1	2	RESISTOR .33 5% 2W PW TC=0+-800	75042	BWH2=33/100-J
A1A7R19	0698-3444	1	1	RESISTOR 316 1% .125W F TC=0+-100	24546	C4=1/8-T0=316R-F
A1A7R20	0683-0275	9	1	RESISTOR 2.7 5% .25W FC TC=400/+500	01121	C827G5
A1A7R21	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A1A7R22	0698-3453	2	1	RESISTOR 196K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1963-F
A1A7R23	0757-0464	5	1	RESISTOR 90.9K 1% .125W F TC=0+-100	24546	C4=1/8-T0=9092-F
A1A7R24	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A7R25	0698-3427	0	2	RESISTOR 13.3 1% .125W F TC=0+-100	03888	PME55=1/8-T0=13R3-F
A1A7R26	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1212-F
A1A7R27	0757-0418	9	2	RESISTOR 619 1% .125W F TC=0+-100	24546	C4=1/8-T0=619H-F
A1A7R28	0757-0317	7	2	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F
A1A7R29	0812-0066	1	2	RESISTOR .33 5% 2W PW TC=0+-800	75042	BWH2=33/100-J
A1A7TP1	1251-0600	0	4	CONNECTOR-SGL CONT PIN 1.14-MM-BSC=8Z SQ	28480	1251-0600
A1A7TP2	1251-0600	0	4	CONNECTOR-SGL CONT PIN 1.14-MM-BSC=8Z SQ	28480	1251-0600
A1A7TP3	1251-0600	0	4	CONNECTOR-SGL CONT PIN 1.14-MM-BSC=8Z SQ	28480	1251-0600
A1A7TP4	1251-0600	0	4	CONNECTOR-SGL CONT PIN 1.14-MM-BSC=8Z SQ	28480	1251-0600
A1A7U1	1820-0223	0	2	IC 301 OP AMP TO-99	04713	MLM301AG
A1A7U2	1820-0223	0	2	IC 301 OP AMP TO-99	04713	MLM301AG
				A1A7 MISCELLANEOUS PARTS		
	4040-0755	2	1	EXTRACTOR-PC BOARD VIO POLYC	28480	4040-0755
	1480-0073	6	1	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1AA	85662-60051	1	1	BOARD ASSEMBLY, RECTIFIER	28480	85662-60051
A1ARC1	0160-2055	9	2	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A1ARC2	0160-4298	6	1	CAPACITOR-FXD 4700PF +-20% 250VDC CER	56289	C067F251H472MS22-CDH
A1ARC3	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A1ARC4	0160-0168	1	2	CAPACITOR-FXD .1UF +-10% 200VDC POLYE	28480	0160-0168
A1ARC5	0160-0168	1		CAPACITOR-FXD .1UF +-10% 200VDC POLYE	28480	0160-0168
A1ARC6	0160-0970	3	1	CAPACITOR-FXD .47UF +-10% 80VDC POLYE	28480	0160-0970
A1ARC7	0180-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A1ARCR1	1901-0662	3	10	DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR2	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR3	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR4	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR5	1884-0018	5	1	THYRISTOR-SCR 2N4186 VHRM=200	04713	2N4186
A1ARCR6	1902-0656	7	1	DIODE-ZNR 39.2V 5% DO-15 PD=1W TC=+.081%	28480	1902-0656
A1ARCR7	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR8	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR9	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR10	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR11	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1ARCR12	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A1AHC51	1990-0486	6	1	LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4684
A1AAR1	0757-0420	3	1	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A1AAR2	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A1AAR3	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2611-F
A1AAR4	0698-3152	8	1	RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3481-F
A1AAR5	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A1AAR6	0757-0367	7	1	RESISTOR 100K 1% .5W F TC=0+-100	28480	0757-0367
A1AAR7	0698-3407	6	1	RESISTOR 1.96K 1% .5W F TC=0+-100	28480	0698-3407
A1AAR8	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422H-F
A1AATP1	0360-1788	7	2	CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ 30	28480	0360-1788
A1AATP2	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ 30	28480	0360-1788
A1ABU1	1901-0367	5	1	DIODE-PWR BRDG 600V 1A	28480	1901-0367
				A1A8 MISCELLANEOUS PARTS		
	4040-0747	2	1	EXTRACTOR-PC BOARD GRA POLYC	28480	4040-0747
	1480-0073	6	1	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A9	85662-60056	6	1	BOARD ASSEMBLY, BUS TRANSITION(INCL WS)	28480	85662-60056
A1A9CR1	1901-0033	2	2	DIODE=GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A9CR2	1901-0033	2		DIODE=GEN PRP 180V 200MA DO-7	28480	1901-0033
A1A9E1	1251-0600	0	2	CONNECTOR=SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A1A9E2	1251-0600	0		CONNECTOR=SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A1A9J1	1251-4828	2	1	CONNECTOR 50-PIN M POST TYPE	28480	1251-4828
A1A9J2	1251-4432	4	1	CONNECTOR 50-PIN F D SUBMIN	28480	1251-4432
A1A9K1	0490-0618	5	1	RELAY 2C 24VDC-COIL 5A 115VAC	28480	0490-0618
A1A9Q1	1854-0477	7	2	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A1A9Q2	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A1A9R1	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A1A9R2	0757-0442	9	2	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A1A9R3	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F

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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1A10	85662-00050	0	1	BOARD ASSEMBLY, DISPLAY MOTHER BOARD (INCLUDES W3)	28480	85662-00050
A1A10C1	0180-2808	2	1	CAPACITOR-FXD .022F+-20% 20VDC AL	28480	0180-2808
A1A10C2	0180-2642	2	1	CAPACITOR-FXD 250UF+50-10% 250VDC AL	56289	380X251F250AA2A
A1A10C3	0180-2641	1	1	CAPACITOR-FXD .018F+75-10% 40VDC AL	00853	500183U040EC2A
A1A10C4	0180-0453	9	1	CAPACITOR-FXD 8700UF+75-10% 40VDC AL	28480	0180-0453
A1A10E1- A1A10E8	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-S2 SQ	28480	0360-1788
A1A10J1	1200-0508	0	2	SOCKET-IC 14-CONT DIP-SLDR	28480	1200-0508
A1A10J2	1200-0508	0		SOCKET-IC 14-CONT DIP-SLDR	28480	1200-0508
A1A10J3	1251-5815	9	1	CONNECTOR 6-PIN M POST TYPE	28480	1251-5815
A1A10J4	1251-5816	0	3	CONNECTOR 4-PIN M POST TYPE	28480	1251-5816
A1A10J5	1251-5816	0		CONNECTOR 4-PIN M POST TYPE	28480	1251-5816
A1A10J6	1251-3195	4	1	CONNECTOR 4-PIN M POST TYPE	28480	1251-3195
A1A10J7	1251-4281	1	1	CONNECTOR 9-PIN M POST TYPE	28480	1251-4281
A1A10J8	1251-5817	1	1	CONNECTOR 2-PIN M POST TYPE	28480	1251-5817
A1A10J9	1251-5816	0		CONNECTOR 4-PIN M POST TYPE	28480	1251-5816
A1A10R1	0757-0367	7	1	RESISTOR 100K 1% .5W F TC=0+-100	28480	0757-0367
A1A10W1	8150-2829	2	1.4 FT	WIRE 18AWG BK 300V PVC 19X30 80C	28480	8150-2829
A1A10W2	8150-3246	9	1.4 FT	WIRE 18AWG W/R 300V PVC 19X30 80C	28480	8150-3246
A1XA2	1251-2035	9	4	CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A1XA3	1251-2034	8	1	CONNECTOR-PC EDGE 10-CONT/ROW 2-ROWS	28480	1251-2034
A1XA4	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A1XA5	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A1XA6	1251-2026	8	2	CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A1XA7	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A1XA8	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A1A11	0960-0383	8	1	MULTIPLIER, MV 20KV	28480	0960-0383

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A1	85662-60014	6	1	BOARD ASSEMBLY, TRIGGER	28480	85662-60014
A3A1C1	0160-0174	9	3	CAPACITOR-FXD .47UF +80-20% 25VDC CER	28480	0160-0174
A3A1C2	0160-0174	9		CAPACITOR-FXD .47UF +80-20% 25VDC CER	28480	0160-0174
A3A1C3	0160-2252	8	1	CAPACITOR-FXD 6.2PF +-25PF 500VDC CER	28480	0160-2252
A3A1C4	0140-0233	9	1	CAPACITOR-FXD 480PF +-1% 300VDC MICA	72136	DM15F481F0300WVIC
A3A1C5	0160-4314	7	1	CAPACITOR-FXD .05UF +-1% 200VDC	28480	0160-4314
A3A1C6	0160-2307	4	1	CAPACITOR-FXD 47PF +-5% 300VDC MICA	28480	0160-2307
A3A1C7	0160-0155	6	1	CAPACITOR-FXD 3300PF +-10% 200VDC POLYE	28480	0160-0155
A3A1C8	0160-4084	8	2	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A1C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A1C10				NOT ASSIGNED		
A3A1C11	0160-3456	6	1	CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A3A1C12	0180-0197	8	7	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A1C13				NOT ASSIGNED		
A3A1C14	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A1C15	0180-0374	3	1	CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D106X9020B2
A3A1C16	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A1C17	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A1C18	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A1C19	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A1C20	0160-0174	9		CAPACITOR-FXD .47UF +80-20% 25VDC CER	28480	0160-0174
A3A1C21				NOT ASSIGNED		
A3A1C22				NOT ASSIGNED		
A3A1C23	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A1C24				NOT ASSIGNED		
A3A1C25				NOT ASSIGNED		
A3A1C26				NOT ASSIGNED		
A3A1C27	0160-2055	9	3	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A1C28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A1C29	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A1CR1	1901-0535	9	4	DIODE-SCHOTTKY	28480	1901-0535
A3A1CR2	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A1CR3	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A1CR4	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A1CR5	1901-0040	1	1	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A1CR6	1901-0179	7	1	DIODE-SWITCHING 15V 50MA 750PS DO-7	28480	1901-0179
A3A1L1	9140-0114	4	3	COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A3A1L2	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A3A1L3	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A3A1Q1	1854-0404	0	6	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A1Q2	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A1Q3	1853-0281	9	2	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A3A1Q4	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A1Q5	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A3A1Q6	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A1Q7	1855-0020	8	3	TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A3A1Q8	1855-0020	8		TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A3A1Q9	1855-0020	8		TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A3A1Q10	1853-0034	0	1	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A3A1Q11	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A1Q12	1854-0546	1	1	TRANSISTOR NPN SI TO-72 PD=200MW	28480	1854-0546
A3A1Q13	1853-0451	5	1	TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A3A1Q14	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A1Q15	1854-0039	7	1	TRANSISTOR NPN 2N3053S SI TO-39 PD=1W	04713	2N3053
A3A1R1	0698-6863	4	1	RESISTOR 1.53K .25% .125W F TC=0+-50	28480	0698-6863
A3A1R2	0698-6867	8	1	RESISTOR 7.35K .5% .125W F TC=0+-50	28480	0698-6867
A3A1R3	0698-7794	2	1	RESISTOR 10K .25% .125W F TC=0+-100	19701	MF4C1/8-T0-1002-C
A3A1R4	0757-0279	0	10	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3A1R5	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3A1R6	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3A1R7	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3A1R8	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3A1R9	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3A1R10	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3A1R11	0698-5573	1	1	RESISTOR 50K .5% .125W F TC=0+-100	24546	C4=1/8-T0-5002-D
A3A1R12	0698-8014	1	1	RESISTOR 22.3K .5% .125W F TC=0+-50	19701	MF4C1/8-T2=2232-D
A3A1R13	0698-6840	7	1	RESISTOR 4.07K .5% .125W F TC=0+-50	24546	NC55=1/8-T2=4071-D
A3A1R14	0698-6217	2	1	RESISTOR 200K .5% .125W F TC=0+-100	28480	0698-6217
A3A1R15	0757-0416	7	4	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A3A1R16	0757-0280	3	11	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1001-F
A3A1R17	0698-0083	8	2	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A3A1R18	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0-196R-F
A3A1R19	0757-0443	0	1	RESISTOR 11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1102-F
A3A1R20	0757-1094	9	2	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1471-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A1R21	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R22	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R23	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R24	0757-0465	6	1	RESISTOR 100K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1003-F
A3A1R25	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1212-F
A3A1R26	0698-3156	2	4	RESISTOR 14.7K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1472-F
A3A1R27	0757-0279	0		RESISTOR 3.16K 1% .125W F TC0+/-100	24546	C4=1/8-T0=3161-F
A3A1R28	0698-0083	8		RESISTOR 1.96K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1961-F
A3A1R29	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R30	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R31	0757-0416	7		RESISTOR 511 1% .125W F TC0+/-100	24546	C4=1/8-T0=511R-F
A3A1R32	0698-3156	2		RESISTOR 14.7K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1472-F
A3A1R33	0698-3440	7		RESISTOR 196 1% .125W F TC0+/-100	24546	C4=1/8-T0=196R-F
A3A1R34	2100-1972	3	1	RESISTOR-TRMR 20K 10% WW SIDE-ADJ 20-TRN	02660	3810P=203
A3A1R35	0698-3156	2		RESISTOR 14.7K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1472-F
A3A1R36	0698-3441	8	1	RESISTOR 215 1% .125W F TC0+/-100	24546	C4=1/8-T0=215R-F
A3A1R37	0698-3445	2	1	RESISTOR 348 1% .125W F TC0+/-100	24546	C4=1/8-T0=348R-F
A3A1R38				NOT ASSIGNED		
A3A1R39				NOT ASSIGNED		
A3A1R40	0757-0279	0		RESISTOR 3.16K 1% .125W F TC0+/-100	24546	C4=1/8-T0=3161-F
A3A1R41	0698-3156	2		RESISTOR 14.7K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1472-F
A3A1R42	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC0+/-100	24546	C4=1/8-T0=5111-F
A3A1R43	0757-1094	9		RESISTOR 1.47K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1471-F
A3A1R44				NOT ASSIGNED		
A3A1R45	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R46	0757-0416	7		RESISTOR 511 1% .125W F TC0+/-100	24546	C4=1/8-T0=511R-F
A3A1R47	0757-0416	7		RESISTOR 511 1% .125W F TC0+/-100	24546	C4=1/8-T0=511R-F
A3A1R48	0757-0442	9	3	RESISTOR 10K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1002-F
A3A1R49	0757-0280	2	1	RESISTOR 13.3K 1% .125W F TC0+/-100	19701	MF4C1/8-T0=1332-F
A3A1R50	0683-1555	0	1	RESISTOR 1.5M 5% .25W FC TC=-900/+1100	01121	CB1555
A3A1R51	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1002-F
A3A1R52	0698-3260	9	1	RESISTOR 464K 1% .125W F TC0+/-100	26480	0698-3260
A3A1R53	0757-0279	0		RESISTOR 3.16K 1% .125W F TC0+/-100	24546	C4=1/8-T0=3161-F
A3A1R54	0757-0346	2	3	RESISTOR 10 1% .125W F TC0+/-100	24546	C4=1/8-T0=10R0-F
A3A1R55	0757-0346	2		RESISTOR 10 1% .125W F TC0+/-100	24546	C4=1/8-T0=10R0-F
A3A1R56	0757-0346	2		RESISTOR 10 1% .125W F TC0+/-100	24546	C4=1/8-T0=10R0-F
A3A1R57				NOT ASSIGNED		
A3A1R58	0698-3160	8	2	RESISTOR 31.6K 1% .125W F TC0+/-100	24546	C4=1/8-T0=3162-F
A3A1R59	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R60	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R61	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R62	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1001-F
A3A1R63				NOT ASSIGNED		
A3A1R64				NOT ASSIGNED		
A3A1R65	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC0+/-100	24546	C4=1/8-T0=2611-F
A3A1R66	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC0+/-100	24546	C4=1/8-T0=4221-F
A3A1R67	0757-0290	5	1	RESISTOR 6.19K 1% .125W F TC0+/-100	19701	MF4C1/8-T0=6191-F
A3A1R68	0698-3160	8		RESISTOR 31.6K 1% .125W F TC0+/-100	24546	C4=1/8-T0=3162-F
A3A1R69	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4=1/8-T0=1002-F
A3A1R70				NOT ASSIGNED		
A3A1R71	0698-3447	4	1	RESISTOR 422 1% .125W F TC0+/-100	24546	C4=1/8-T0=422R-F
A3A1R72	0698-3450	9	1	RESISTOR 42.2K 1% .125W F TC0+/-100	24546	C4=1/8-T0=4222-F
A3A1TP1	1251-0600	0	5	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A3A1TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A3A1TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A3A1TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A3A1TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A3A1U1	1820-1423	4	2	IC MV TTL LS MONOSTBL RETRIG DUAL	01295	SN74LS123N
A3A1U2	1820-1417	6	1	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS26N
A3A1U3	1820-1281	2	1	IC DCOR TTL LS 2-TO-4-LINE DUAL 2-INP	01295	SN74LS139N
A3A1U4	1820-1112	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS74N
A3A1U5	1820-1196	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A1U6	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A1U7	1820-0471	0	1	IC INV TTL HEX 1-INP	01295	SN7406N
A3A1U8	1826-0319	7	2	IC OP AMP TO-99	27014	LF356H
A3A1U9	1820-1423	4		IC MV TTL LS MONOSTBL RETRIG DUAL	01295	SN74LS123N
A3A1U10	1820-1212	9	1	IC FF TTL LS J-K NEG-EDGE-TRIG	01295	SN74LS112N
A3A1U11	1820-1201	6	1	IC GATE TTL LS AND QUAD 2-INP	01295	SN74LS08N
A3A1U12	1820-1112	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS74N
A3A1U13	1820-0475	4	1	IC COMPARATOR TO-99	27014	LM306H
A3A1U14	1826-0319	7		IC OP AMP TO-99	27014	LF356H
A3A1U15	1820-1425	6	1	IC SCHMITT-TRIG TTL LS NAND QUAD 2-INP	01295	SN74LS132N
A3A1U16	1820-1298	1	1	IC MUXR/DATA-SEL TTL LS 8-TO-1-LINE	01295	SN74LS251N
A3A1U17	1820-1197	9	1	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS00N
A3A1U18	1820-1216	3	1	IC DCOR TTL LS 3-TO-8-LINE 3-INP	01295	SN74LS138N

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A1VR1	1902-3224	1	2	DIODE-ZNR 17.8V 5% DO-7 PD=.4W TC=+.067%	28480	1902-3224
A3A1VR2	1902-3224	1		DIODE-ZNR 17.8V 5% DO-7 PD=.4W TC=+.067%	28480	1902-3224
A3A1VR3	1902-3182	0	1	DIODE-ZNR 12.1V 5% DO-7 PD=.4W TC=+.064%	28480	1902-3182
A3A1VR4	1902-0041	4	2	DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
A3A1VR5	1902-0041	4		DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
				A3A1 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0749	4	2	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749

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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A2	85662-60025	9	1	BOARD ASSEMBLY, INTENSITY CONTROL	28480	85662-60025
A3A2C1	0160-2249	3	1	CAPACITOR-FXD 4.7PF +-25PF 500VDC CER	28480	0160-2249
A3A2C2	0160-2264	2	2	CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A3A2C3	0140-0198	5	1	CAPACITOR-FXD 200PF +-5% 300VDC MICA	72136	DM15F201J0300WV1CR
A3A2C4	0160-2202	8	1	CAPACITOR-FXD 75PF +-5% 300VDC MICA	28480	0160-2202
A3A2C5	0160-4084	8	17	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C6	0180-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A3A2C7	0180-0374	3	3	CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D106X9020B2
A3A2C8	0180-0374	3		CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D106X9020B2
A3A2C9	0180-0374	3		CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D106X9020B2
A3A2C10	0160-2055	9	4	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A2C11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A2C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A2C13	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C14	0160-2257	3	1	CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A3A2C15	0160-2264	2		CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A3A2C16	0140-0192	9	1	CAPACITOR-FXD 68PF +-5% 300VDC MICA	72136	DM15E680J0300WV1CR
A3A2C17	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C18	0160-2204	0	1	CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A3A2C19	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C20	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C21	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C22	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C23	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C24	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C25	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C26	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C27	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C28	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C29	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C30	0140-0205	5	1	CAPACITOR-FXD 62PF +-5% 300VDC MICA	72136	DM15E620J0300WV1CR
A3A2C31	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C32	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C33	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A2C34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A2CR1	1901-0040	1	12	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR3	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR4	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR5	1901-0518	8	5	DIODE-SCHOTTKY	28480	1901-0518
A3A2CR6	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A3A2CR7	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A3A2CR8	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR9	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR10	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR11	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR12	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR13	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR14	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2CR15	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A3A2CR16	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A3A2CR17	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A2J1	1250-0543	8	2	CONNECTOR-RF SM-SNP M PC 50-OMM	28480	1250-0543
A3A2J2	1250-0543	8		CONNECTOR-RF SM-SNP M PC 50-OMM	28480	1250-0543
A3A2L1	9140-0210	1	2	COIL-MLD 100UH 5% Q=50 .155DX.375LG-NOM	28480	9140-0210
A3A2L2	08558-80011	6	1	FILTER, COIL, BLUE	28480	08558-80011
A3A2L3	9140-0237	2	1	COIL-MLD 200UH 5% Q=65 .155DX.375LG-NOM	28480	9140-0237
A3A2L4				NOT ASSIGNED		
A3A2L5	9140-0210	1		COIL-MLD 100UH 5% Q=50 .155DX.375LG-NOM	28480	9140-0210
A3A2Q1	1855-0081	1	4	TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A2Q2	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A2Q3	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A2Q4	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A2Q5	1853-0007	7	6	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A3A2Q6	1854-0404	0	3	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A2Q7	1853-0034	0	1	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A3A2Q8	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A3A2Q9	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A3A2Q10	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A2Q11	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A3A2Q12	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A2Q13	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A3A2Q14	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A2R1	0757-0449	6	7	RESISTOR 20K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2002-F
A3A2R2	0757-0449	6		RESISTOR 20K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2002-F
A3A2R3	0757-0449	6		RESISTOR 20K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2002-F
A3A2R4	0757-0449	6		RESISTOR 20K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2002-F
A3A2R5	0757-0449	6		RESISTOR 20K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2002-F
A3A2R6	0757-0449	6		RESISTOR 20K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2002-F
A3A2R7	0757-0442	9	8	RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R8	0698-3153	9	2	RESISTOR 3.83K 1% .125W F TC0+/-100	24546	C4-1/8-T0-3831-F
A3A2R9	0698-3156	2	1	RESISTOR 14.7K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1472-F
A3A2R10	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R11	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R12	2100-3354	9	1	RESISTOR-TRMR 50K 10% C SIDE-ADJ 1-TRN	28480	2100-3354
A3A2R13	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R14	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R15	0757-0449	6		RESISTOR 20K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2002-F
A3A2R16	0757-0438	3	5	RESISTOR 5.11K 1% .125W F TC0+/-100	24546	C4-1/8-T0-5111-F
A3A2R17	0757-0470	3	1	RESISTOR 162K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1623-F
A3A2R18	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+/-100	24546	C4-1/8-T0-5111-F
A3A2R19	0757-0280	3	3	RESISTOR 1K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1001-F
A3A2R20	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R21*	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1622-F
A3A2R22	0757-0443	0	1	RESISTOR 11K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1102-F
A3A2R23	0757-0421	4	1	RESISTOR 825 1% .125W F TC0+/-100	24546	C4-1/8-T0-825R-F
A3A2R24	0698-3157	3	3	RESISTOR 19.6K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1962-F
A3A2R25	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1001-F
A3A2R26	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R27	0757-0422	5	3	RESISTOR 909 1% .125W F TC0+/-100	24546	C4-1/8-T0-909R-F
A3A2R28	0757-0317	7	3	RESISTOR 1.33K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1331-F
A3A2R29	0757-0422	5		RESISTOR 909 1% .125W F TC0+/-100	24546	C4-1/8-T0-909R-F
A3A2R30	0757-0317	7		RESISTOR 1.33K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1331-F
A3A2R31	0757-0317	7		RESISTOR 1.33K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1331-F
A3A2R32	0757-0422	5		RESISTOR 909 1% .125W F TC0+/-100	24546	C4-1/8-T0-909R-F
A3A2R33	0757-0280	3		RESISTOR 1K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1001-F
A3A2R34	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2151-F
A3A2R35	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1471-F
A3A2R36	0698-3435	0	1	RESISTOR 38.3 1% .125W F TC0+/-100	24546	C4-1/8-T0-3833-F
A3A2R37	0698-3151	7	1	RESISTOR 2.87K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2871-F
A3A2R38	0757-0398	4	1	RESISTOR 75 1% .125W F TC0+/-100	24546	C4-1/8-T0-75R0-F
A3A2R39	0757-0401	0	2	RESISTOR 100 1% .125W F TC0+/-100	24546	C4-1/8-T0-101-F
A3A2R40	0698-3446	3	2	RESISTOR 383 1% .125W F TC0+/-100	24546	C4-1/8-T0-383R-F
A3A2R41	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+/-100	24546	C4-1/8-T0-5111-F
A3A2R42	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC0+/-100	24546	C4-1/8-T0-511R-F
A3A2R43	0757-0401	0		RESISTOR 100 1% .125W F TC0+/-100	24546	C4-1/8-T0-101-F
A3A2R44	0757-0460	1	1	RESISTOR 61.9K 1% .125W F TC0+/-100	24546	C4-1/8-T0-6192-F
A3A2R45	0757-0288	1	1	RESISTOR 9.09K 1% .125W F TC0+/-100	19701	MF4C1/8-T0-9091-F
A3A2R46	0757-0419	0	2	RESISTOR 681 1% .125W F TC0+/-100	24546	C4-1/8-T0-681R-F
A3A2R47	0757-0278	9	1	RESISTOR 1.78K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1781-F
A3A2R48	0698-3155	1	1	RESISTOR 4.64K 1% .125W F TC0+/-100	24546	C4-1/8-T0-4641-F
A3A2R49	0757-0394	0		RESISTOR 51.1 1% .125W F TC0+/-100	24546	C4-1/8-T0-511R-F
A3A2R50	2100-3351	6	2	RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	28480	2100-3351
A3A2R51	2100-3351	6		RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	28480	2100-3351
A3A2R52	0698-3443	0	1	RESISTOR 287 1% .125W F TC0+/-100	24546	C4-1/8-T0-287R-F
A3A2R53	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+/-100	24546	C4-1/8-T0-5111-F
A3A2R54	0698-0082	7	1	RESISTOR 464 1% .125W F TC0+/-100	24546	C4-1/8-T0-4640-F
A3A2R55	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+/-100	24546	C4-1/8-T0-5111-F
A3A2R56	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC0+/-100	24546	C4-1/8-T0-2371-F
A3A2R57	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1621-F
A3A2R58	0757-0416	7	1	RESISTOR 511 1% .125W F TC0+/-100	24546	C4-1/8-T0-511R-F
A3A2R59	0698-3442	9	1	RESISTOR 237 1% .125W F TC0+/-100	24546	C4-1/8-T0-237R-F
A3A2R60	0698-3446	3		RESISTOR 383 1% .125W F TC0+/-100	24546	C4-1/8-T0-383R-F
A3A2R61	0757-0419	0		RESISTOR 681 1% .125W F TC0+/-100	24546	C4-1/8-T0-681R-F
A3A2R62	0698-3157	3		RESISTOR 19.6K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1962-F
A3A2R63	0698-3153	9		RESISTOR 3.83K 1% .125W F TC0+/-100	24546	C4-1/8-T0-3831-F
A3A2R64	0757-0442	9		RESISTOR 10K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1002-F
A3A2R65	0698-3157	3		RESISTOR 19.6K 1% .125W F TC0+/-100	24546	C4-1/8-T0-1962-F
A3A2R66	0757-0405	4	1	RESISTOR 162 1% .125W F TC0+/-100	24546	C4-1/8-T0-162R-F
A3A2TP1	0360-0535	0	13	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP5	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP6	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP7	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP8	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP9	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP10	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A2TP11	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP12	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2TP13	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A2U1	1820-1546	4	1	IC SN CMOS BILATL QUAD	01928	CD4066AY
A3A2U2	1820-1196	8	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A2U3	1820-1197	9	1	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS00N
A3A2U4	1826-0026	3	1	IC 311 COMPARATOR TO-99	04713	MLM311G
A3A2U5	1826-0081	0	5	IC 318 OP AMP TO-99	27014	LM318H
A3A2U6	1820-1415	4	1	IC SCHMITT-TRIG TTL LS NAND DUAL 4-INP	01295	SN74LS13N
A3A2U7	1820-1425	6	1	IC SCHMITT-TRIG TTL LS NAND QUAD 2-INP	01295	SN74LS132N
A3A2U8	1826-0081	0		IC 318 OP AMP TO-99	27014	LM318H
A3A2U9	1826-0081	0		IC 318 OP AMP TO-99	27014	LM318H
A3A2U10	1820-1199	1	1	IC INV TTL LS HEX 1-INP	01295	SN74LS04N
A3A2U11	1820-0054	5	1	IC GATE TTL NAND QUAD 2-INP	01295	SN7400N
A3A2U12	1826-0180	0	1	IC TIMER TTL MONO/ASTBL	16324	NE555V
A3A2U13	1820-1432	5	1	IC CNTR TTL LS 8IN SYNCHRO POS-EDGE-TRIG	01295	SN74LS163N
A3A2U14	1826-0417	6	2	IC SWITCH 16-DIP-C	27014	NF13333D
A3A2U15	1826-0417	6		IC SWITCH 16-DIP-C	27014	NF13333D
A3A2U16	1826-0081	0		IC 318 OP AMP TO-99	27014	LM318H
A3A2U17	1826-0081	0		IC 318 OP AMP TO-99	27014	LM318H
A3A2U18	1820-1112	8	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS74N
A3A2U19	1820-1491	6	1	IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A2VR1	1902-0554	4	1	DIODE-ZNR 10V 5% DO-15 PD=1W TC=+.06%	28480	1902-0554
A3A2VR2	1902-0025	4	1	DIODE-ZNR 10V 5% DO-7 PD=.4W TC=+.06%	28480	1902-0025
A3A2VR3	1902-3092	1	1	DIODE-ZNR 4.99V 2% DO-7 PD=.4W TC=+.012%	28480	1902-3092
A3A2VR4	1902-3139	7	1	DIODE-ZNR 8.25V 5% DO-7 PD=.4W TC=+.053%	28480	1902-3139
				A3A2 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0750	7	2	EXTRACTOR-PC BOARD RED POLYC	28480	4040-0750

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A3	85602-60026	0	1	BOARD ASSEMBLY, LINE GENERATOR	28480	85602-60026
A3A3C1	0160-0374	3	3	CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	1500106X9020H2
A3A3C2	0160-0374	3		CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	1500106X9020H2
A3A3C3	0160-0374	3		CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	1500106X9020H2
A3A3C4	0160-2257	3	2	CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A3A3C5	0160-2257	3		CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A3A3C6	0160-4084	8	17	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C8	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C10	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C11	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C12	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C13	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C14	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C15	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C16	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C17	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C18	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C19	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C20	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C21	0160-2250	6	5	CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A3A3C22	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A3A3C23	0140-0198	5	2	CAPACITOR-FXD 200PF +-5% 300VDC MICA	72136	DM15F201J0300HV1CH
A3A3C24	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A3A3C25	0140-0198	5		CAPACITOR-FXD 200PF +-5% 300VDC MICA	72136	DM15F201J0300HV1CH
A3A3C26	0160-2675	9	2	CAPACITOR-FXD 3900PF +-1% 300VDC MICA	28480	0160-2675
A3A3C27*				*FACTORY SELECTED PART,NORMALLY OPEN		
A3A3C28	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A3A3C29	0160-3995	8	2	CAPACITOR-FXD 3900PF +-10% 250VDC CER	28480	0160-3995
A3A3C30	0160-3995	8		CAPACITOR-FXD 3900PF +-10% 250VDC CER	28480	0160-3995
A3A3C31	0160-2675	9		CAPACITOR-FXD 3900PF +-1% 300VDC MICA	28480	0160-2675
A3A3C32*				*FACTORY SELECTED PART,NORMALLY OPEN		
A3A3C33	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A3A3C34	0140-0191	8	2	CAPACITOR-FXD 56PF +-5% 300VDC MICA	72136	DM15E560J0300HV1CH
A3A3C35	0140-0199	8	2	CAPACITOR-FXD 240PF +-5% 300VDC MICA	72136	DM15F241J0300HV1CH
A3A3C36	0160-3536	3	2	CAPACITOR-FXD 620PF +-5% 100VDC MICA	28480	0160-3536
A3A3C37	0140-0191	8		CAPACITOR-FXD 56PF +-5% 300VDC MICA	72136	DM15E560J0300HV1CH
A3A3C38	0140-0199	8		CAPACITOR-FXD 240PF +-5% 300VDC MICA	72136	DM15F241J0300HV1CH
A3A3C39	0160-3536	3		CAPACITOR-FXD 620PF +-5% 100VDC MICA	28480	0160-3536
A3A3C40	0160-2055	9	3	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A3C41	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A3C42	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A3C43	0160-2241	5	2	CAPACITOR-FXD 2.2PF +-25PF 500VDC CER	28480	0160-2241
A3A3C44	0160-2241	5		CAPACITOR-FXD 2.2PF +-25PF 500VDC CER	28480	0160-2241
A3A3C45	0160-2264	2	2	CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A3A3C46	0160-2264	2		CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A3A3C47	0160-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	1500225X9020A2
A3A3C48	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3C49	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A3CR1	1901-0535	9	21	DIODE-SCHOTTKY	28480	1901-0535
A3A3CR2	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR3	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR4	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR5	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR6	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR7	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR8	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR9	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR10	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR11	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR12	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR13	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR14	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR15	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR16	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR17	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR18	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR19	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR20	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3A3CR21	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A3CR22	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A3CR23	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A3CR24	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A3CR25	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A3CR26	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A3A3L1	9140-0210	1	2	COIL-MLD 100UH 5% Q#50 .155DX.375LG-NOM	28480	9140-0210
A3A3L2	9140-0210	1		COIL-MLD 100UH 5% Q#50 .155DX.375LG-NOM	28480	9140-0210
A3A3L3	9100-1618	1	3	COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A3A3L4	9100-1620	5	2	COIL-MLD 15UH 10% Q#65 .155DX.375LG-NOM	28480	9100-1620
A3A3L5	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A3A3L6	9100-1620	5		COIL-MLD 15UH 10% Q#65 .155DX.375LG-NOM	28480	9100-1620
A3A3L7	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A3A3Q1	1855-0081	1	8	TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q2	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q3	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q4	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q5	1855-0241	5	2	TRANSISTOR MOSFET N-CHAN E-MODE TO-72 SI	18324	SD215
A3A3Q6	1855-0050	4	2	TRANSISTOR-JFET DUAL N-CHAN D-MODE SI	28480	1855-0050
A3A3Q7	1855-0020	8	2	TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A3A3Q8	1855-0020	8		TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A3A3Q9	1853-0034	0	3	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A3A3Q10	1855-0241	5		TRANSISTOR MOSFET N-CHAN E-MODE TO-72 SI	18324	SD215
A3A3Q11	1855-0050	4		TRANSISTOR-JFET DUAL N-CHAN D-MODE SI	28480	1855-0050
A3A3Q12	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q13	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q14	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q15	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A3A3Q16	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A3A3Q17	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A3A3R1	2100-3356	1	1	RESISTOR-TRMR 200K 10% C SIDE-ADJ 1-TRN	28480	2100-3356
A3A3R2	2100-3357	2	1	RESISTOR-TRMR 500K 10% C SIDE-ADJ 1-TRN	28480	2100-3357
A3A3R3	0698-3440	7	3	RESISTOR 196 1% .125W F TC#0+-100	24546	C4=1/8-T0-196R-F
A3A3R4	2100-3207	1	2	RESISTOR-TRMR 5K 10% C SIDE-ADJ 1-TRN	28480	2100-3207
A3A3R5	2100-3207	1		RESISTOR-TRMR 5K 10% C SIDE-ADJ 1-TRN	28480	2100-3207
A3A3R6	2100-3274	2	2	RESISTOR-TRMR 10K 10% C SIDE-ADJ 1-TRN	28480	2100-3274
A3A3R7	2100-3351	6	2	RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	28480	2100-3351
A3A3R8	2100-3351	6		RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	28480	2100-3351
A3A3R9	2100-3274	2		RESISTOR-TRMR 10K 10% C SIDE-ADJ 1-TRN	28480	2100-3274
A3A3R10	0698-5350	2	8	RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R11	0698-5350	2		RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R12	0698-3157	3	6	RESISTOR 19.6K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1962-F
A3A3R13	0698-5350	2		RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R14	0698-5350	2		RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R15	0698-7095	6	2	RESISTOR 11K .25% .125W F TC#0+-50	28480	0698-7095
A3A3R16	0698-3428	1	2	RESISTOR 14.7 1% .125W F TC#0+-100	03888	PME55-1/8-T0-14R7-F
A3A3R17	0698-0085	0	2	RESISTOR 2,61K 1% .125W F TC#0+-100	24546	C4=1/8-T0-2611-F
A3A3R18	0698-5350	2		RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R19	0757-0442	9	4	RESISTOR 10K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1002-F
A3A3R20	0757-0438	3	3	RESISTOR 5,11K 1% .125W F TC#0+-100	24546	C4=1/8-T0-5111-F
A3A3R21	0757-0462	3	1	RESISTOR 75K 1% .125W F TC#0+-100	24546	C4=1/8-T0-7502-F
A3A3R22	0698-3440	7		RESISTOR 196 1% .125W F TC#0+-100	24546	C4=1/8-T0-196R-F
A3A3R23	0698-0084	9	3	RESISTOR 2,15K 1% .125W F TC#0+-100	24546	C4=1/8-T0-2151-F
A3A3R24	0757-0424	7	2	RESISTOR 1,1K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1101-F
A3A3R25	0698-3161	9	1	RESISTOR 38.3K 1% .125W F TC#0+-100	24546	C4=1/8-T0-3832-F
A3A3R26	0757-0444	1	1	RESISTOR 12,1K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1212-F
A3A3R27	0698-5350	2		RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R28	0698-5350	2		RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R29	0698-5350	2		RESISTOR 2,613K .1% .125W F TC#0+-25	28480	0698-5350
A3A3R30	0698-7095	6		RESISTOR 11K .25% .125W F TC#0+-50	28480	0698-7095
A3A3R31	0698-3428	1		RESISTOR 14.7 1% .125W F TC#0+-100	03888	PME55-1/8-T0-14R7-F
A3A3R32	0757-0442	9		RESISTOR 10K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1002-F
A3A3R33	0698-0085	0		RESISTOR 2,61K 1% .125W F TC#0+-100	24546	C4=1/8-T0-2611-F
A3A3R34	0757-0442	9		RESISTOR 10K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1002-F
A3A3R35	0698-3136	8	1	RESISTOR 17.8K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1782-F
A3A3R36	0757-0438	3		RESISTOR 5,11K 1% .125W F TC#0+-100	24546	C4=1/8-T0-5111-F
A3A3R37	0698-3440	7		RESISTOR 196 1% .125W F TC#0+-100	24546	C4=1/8-T0-196R-F
A3A3R38	0698-0084	9		RESISTOR 2,15K 1% .125W F TC#0+-100	24546	C4=1/8-T0-2151-F
A3A3R39	0698-3157	3		RESISTOR 19.6K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1962-F
A3A3R40	0698-3157	3		RESISTOR 19.6K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1962-F
A3A3R41	0698-3157	3		RESISTOR 19.6K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1962-F
A3A3R42	0698-3157	3		RESISTOR 19.6K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1962-F
A3A3R43	2100-3354	9	1	RESISTOR-TRMR 50K 10% C SIDE-ADJ 1-TRN	28480	2100-3354
A3A3R44	0698-3157	3		RESISTOR 19.6K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1962-F
A3A3R45	0757-0401	0	1	RESISTOR 100 1% .125W F TC#0+-100	24546	C4=1/8-T0-101-F
A3A3R46	0757-0442	9		RESISTOR 10K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1002-F
A3A3R47	0698-6963	5	2	RESISTOR 5,55K .1% .125W F TC#0+-25	28480	0698-6963
A3A3R48	0698-6963	5		RESISTOR 5,55K .1% .125W F TC#0+-25	28480	0698-6963
A3A3R49	0698-3150	6	1	RESISTOR 2,37K 1% .125W F TC#0+-100	24546	C4=1/8-T0-2371-F
A3A3R50	0757-0424	7		RESISTOR 1,1K 1% .125W F TC#0+-100	24546	C4=1/8-T0-1101-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A3R51	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/B=TO=2151=F
A3A3R52	0757-0421	4		RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/B=TO=825H=F
A3A3R53	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/B=TO=5111=F
A3A3TP1	0360-0535	0	12	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP5	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP6	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP7	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP8	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP9	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP10	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP11	0360-0535	0	0	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3TP12	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A3U1	1826-0079	6	4	IC 2625 OP AMP TO-99	29832	1321
A3A3U2	1826-0089	8	2	IC 2525 OP AMP TO-99	29832	1322
A3A3U3	1826-0079	6	2	IC 2625 OP AMP TO-99	29832	1321
A3A3U4	1826-0448	3		IC-DIGITAL-ANALOG CONV 7520	28480	1826-0448
A3A3U5	1820-1444	9		IC MUXR/DATA-SEL TTL LS 2-TO-1-LINE QUAD	01295	SN74LS298N
A3A3U6	1820-1196	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A3U7	1826-0079	6		IC 2625 OP AMP TO-99	29832	1321
A3A3U8	1826-0448	3		IC-DIGITAL-ANALOG CONV 7520	28480	1826-0448
A3A3U9	1820-1444	9		IC MUXR/DATA-SEL TTL LS 2-TO-1-LINE QUAD	01295	SN74LS298N
A3A3U10	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A3U11	1826-0079	6	1	IC 2625 OP AMP TO-99	29832	1321
A3A3U12	1826-0089	8		IC 2525 OP AMP TO-99	29832	1322
A3A3U13	1826-0081	0		IC 318 OP AMP TO-99	27014	LM318H
A3A3U14	1820-1195	7		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A3A3U15	1820-1197	9		IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS00N
A3A3VR1	1902-3036	3	1	DIODE-ZNR 3.16V 5% DO-7 PD=.4W TC=-.064%	28480	1902-3036
A3A3VR2	1902-0686	3	1	DIODE-ZNR 1N825 6.2V 2% DO-7 PD=.4W	04713	1N825
A3A3 MISCELLANEOUS PARTS						
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0751	8	2	EXTRACTOR-PC BOARD DRN POLYC	28480	4040-0751

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A4	85002-00023	7	1	BOARD ASSEMBLY, MEMORY	28480	85002-00023
A3A4C1	0160-4084	8	16	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C2	0180-2144	9	1	CAPACITOR-FXD 200UF+-75-10% 25VDC AL	56289	300207G0250M9
A3A4C3	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C4	0160-0127	2	10	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C5	0180-1746	5	5	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A3A4C6	0180-0374	3	1	CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D106X9020B2
A3A4C7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C8	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C10	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A3A4C11	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C12	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A3A4C13	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C14	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C15	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C16	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C17	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C18	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C19	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C20	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C21	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A3A4C22	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C23	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C24	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C25	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C26	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C27	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C28	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A3A4C29	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4C30	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C31	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C32	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A4C33	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A4L1	9140-0171	3	1	COIL-MLD 40UH 10% Q=20 .296DX,968LG-NOM	28480	9140-0171
A3A4L2	9140-0210	1	1	COIL-MLD 100UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0210
A3A4P1	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A3A4U1	1818-0156	3	12	IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U2	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U3	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U4	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U5	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U6	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U7	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U8	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U9	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U10	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U11	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U12	1818-0156	3		IC NMOS 4K RAM DYN 470-NS 3-S	28480	1818-0156
A3A4U13	1818-0293	9	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	28480	1818-0293
A3A4U14	1820-1492	7	2	IC BFR TTL LS INV HEX 1-INP	01295	SN74LS368N
A3A4U15	1820-1196	8	4	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A4U16	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A4U17	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A4U18	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A4U19	1820-1492	7		IC BFR TTL LS INV HEX 1-INP	01295	SN74LS368N
A3A4U20	1820-1982	0	1	IC DRV R TTL= DUAL	01295	SN75363N
A3A4U21	1826-0147	9	1	IC 7812 V RGLTR TO=220	04713	MC7812CP
A3A4U22	1820-1278	7	1	IC CNTR TTL LS BIN UP/DOWN SYNCHRO	01295	SN74LS191N
A3A4VR1	1902-0041	4	1	DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
				A3A4 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0752	9	2	EXTRACTOR-PC BOARD YEL POLYC	28480	4040-0752

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A5	85662-00024	8	1	BOARD ASSEMBLY, DATA MANIPULATOR	28480	85662-00024
A3ASC1	0160-4084	8	11	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC2	0180-0228	6	2	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X901582
A3ASC3	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC4	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC5	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC8	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC10	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC11	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC12	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3ASC13	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X901582
A3A5L1	08558-80011	6	1	FILTER, COIL, BLUE	28480	08558-80011
A3ASR1	0698-3155	1	14	RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR2	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR3	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR4	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR5	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR6	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR7	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR8	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR9	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR10	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR11	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR12	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR13	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR14	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A3ASR15	0698-3132	4	2	RESISTOR 261 1% .125W F TC0+-100	24546	C4-1/8-T0-2610-F
A3ASR16	0698-3132	4		RESISTOR 261 1% .125W F TC0+-100	24546	C4-1/8-T0-2610-F
A3ASTP1	0360-0535	0	4	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ASTP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ASTP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ASTP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ASU1	1816-1129	8	1	IC ROM 32X8	28480	1816-1129
A3ASU2	1820-1974	0	3	IC ARITH=LGC-UN TTL 8	01295	8N748181J
A3ASU3	1820-1974	0		IC ARITH=LGC-UN TTL 8	01295	8N748181J
A3ASU4	1820-1974	0		IC ARITH=LGC-UN TTL 8	01295	8N748181J
A3ASU5	1820-1491	6	2	IC BFR TTL L8 NON-INV HEX 1-INP	01295	8N74L8367N
A3ASU6	1820-1439	2	3	IC MUXR/DATA=SEL TTL L8 2-T0-1-LINE	01295	8N74L8258N
A3ASU7	1820-1196	8	2	IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A3ASU8	1820-1439	2		IC MUXR/DATA=SEL TTL L8 2-T0-1-LINE	01295	8N74L8258N
A3ASU9	1820-1196	8		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A3ASU10	1820-1439	2		IC MUXR/DATA=SEL TTL L8 2-T0-1-LINE	01295	8N74L8258N
A3ASU11	1820-1491	6		IC BFR TTL L8 NON-INV HEX 1-INP	01295	8N74L8367N
A3ASU12	1820-1076	3	1	IC FF TTL 8 D-TYPE POS-EDGE-TRIG CLEAR	01295	8N748174N
A3ASU13	1816-0724	7	3	IC TTL 64-BIT RAM 35-NS 3-8	01295	8N748189N
A3ASU14	1820-1130	0	1	IC GATE TTL 8 NAND 13-INP	01295	8N748133N
A3ASU15	1816-0724	7		IC TTL 64-BIT RAM 35-NS 3-8	01295	8N748189N
A3ASU16	1820-1305	1	1	IC GEN TTL 8 LOOK-AHD-CRY	01295	8N748182N
A3ASU17	1816-0724	7		IC TTL 64-BIT RAM 35-NS 3-8	01295	8N748189N
A3ASU18	1816-1130	1	1	IC ROM 32X8	28480	1816-1130
A3ASU19	1820-0681	4	1	IC GATE TTL 8 NAND QUAD 2-INP	01295	8N74800N
A3ASU20	1820-0685	8	1	IC GATE TTL 8 NAND TPL 3-INP	01295	8N74810N
A3ASU21	1820-1202	7	1	IC GATE TTL L8 NAND TPL 3-INP	01295	8N74L810N
A3ASU22	1820-1197	9	1	IC GATE TTL L8 NAND QUAD 2-INP	01295	8N74L800N
A3ASU23	1820-1287	8	1	IC BFR TTL L8 NAND QUAD 2-INP	01295	8N74L837N
A3ASU24	1820-1195	7	1	IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	01295	8N74L8175N
				A3AS MISCELLANEOUS PARTS		
				PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
				EXTRACTOR-PC BOARD GRN POLYC	28480	4040-0753

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A6	85662-60022	6	1	BOARD ASSEMBLY, MAIN CONTROL	28480	85662-60022
A3A6C1	0160-4084	8	12	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C2	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C3	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C4	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C5	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C8	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C10	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C11	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6C12	0160-0573	2	1	CAPACITOR-FXD 4700PF +-20% 100VDC CER	28480	0160-0573
A3A6C13	0180-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	1500225X9020A2
A3A6C14	0180-0226	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	1500226X9015B2
A3A6C15	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A6E1	1251-4787	2	1	SHUNT, DIP, 8-POSITIONS	28480	1251-4787
A3A6J1	1200-0507	9	1	SOCKET-IC 16-CONT DIP-SLDR	28480	1200-0507
A3A6J2	1460-1469	8	1	WIREFORM BE CU AG	28480	1460-1469
A3A6L1	08558-80011	6	1	FILTER, COIL, BLUE	28480	08558-80011
A3A6R1	0698-3155	1	3	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0-4641-F
A3A6R2	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0-4641-F
A3A6R3	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0-4641-F
A3A6R4	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1962-F
A3A6R5	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A3A6R6	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A3A6TP1	0360-0535	0	11	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP5	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP6	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP7	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP8	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP9	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP10	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6TP11	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A6U1	1820-1871	6	2	IC ADDR TTL 8 BIN FULL ADDR 4-BIT	01295	SN748283N
A3A6U2	1820-1871	6		IC ADDR TTL 8 BIN FULL ADDR 4-BIT	01295	SN748283N
A3A6U3	1810-0205	7	1	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R4,7K
A3A6U4	1816-1378	9	1	IC ROM 512X8	28480	1816-1378
A3A6U5	1816-1133	4	1	IC ROM 512X8	28480	1816-1133
A3A6U6	1816-1379	0	1	IC ROM 512X8	28480	1816-1379
A3A6U7	1816-1127	6	1	IC ROM 512X8	28480	1816-1127
A3A6U8	1816-1134	5	1	IC ROM 512X8	28480	1816-1134
A3A6U9	1816-1376	7	1	IC ROM 512X8	28480	1816-1376
A3A6U10	1816-1128	7	1	IC ROM 512X8	28480	1816-1128
A3A6U11	1816-1377	8	1	IC ROM 512X8	28480	1816-1377
A3A6U12	1820-1076	3	3	IC FF TTL 8 D-TYPE POS-EDGE-TRIG CLEAR	01295	SN748174N
A3A6U13	1820-1981	9	3	IC RGTR TTL 8 QUAD 2-INP	34335	AM25809PC
A3A6U14	1820-1981	9		IC RGTR TTL 8 QUAD 2-INP	34335	AM25809PC
A3A6U15	1820-1076	3		IC FF TTL 8 D-TYPE POS-EDGE-TRIG CLEAR	01295	SN748174N
A3A6U16	1820-1981	9		IC RGTR TTL 8 QUAD 2-INP	34335	AM25809PC
A3A6U17	1820-0685	8	2	IC GATE TTL 8 NAND TPL 3-INP	01295	SN74810N
A3A6U18	1820-0681	4	2	IC GATE TTL 8 NAND QUAD 2-INP	01295	SN74800N
A3A6U19	1820-0685	8		IC GATE TTL 8 NAND TPL 3-INP	01295	SN74810N
A3A6U20	1820-1423	4	1	IC MV TTL 8 MONOSTEL RETRIG DUAL	01295	SN74LS123N
A3A6U21	1820-1729	3	2	IC LCH TTL 8 COM CLEAR 8-BIT	01295	SN74LS259N
A3A6U22	1820-0693	8	1	IC FF TTL 8 D-TYPE POS-EDGE-TRIG	01295	SN748174N
A3A6U23	1820-1729	3		IC LCH TTL 8 COM CLEAR 8-BIT	01295	SN74LS259N
A3A6U24	1820-1196	8	1	IC FF TTL 8 D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3A6U25	1820-1112	8	1	IC FF TTL 8 D-TYPE POS-EDGE-TRIG	01295	SN74LS174N
A3A6U26	1820-1216	3	1	IC DCDR TTL 8 3-TO-8-LINE 3-INP	01295	SN74LS138N
A3A6U27	1820-0681	4		IC GATE TTL 8 NAND QUAD 2-INP	01295	SN74800N
A3A6U28	1820-1076	3		IC FF TTL 8 D-TYPE POS-EDGE-TRIG CLEAR	01295	SN748174N
A3A6U29	1820-1491	6	1	IC 8FR TTL 8 NON-INV HEX 1-INP	01295	SN74LS367N
				A3A6 MISCELLANEOUS PARTS		
				PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
				EXTRACTOR-PC BOARD BLU POLYC	28480	4040-0754

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A7	85662-60021	5	1	BOARD ASSEMBLY, INTERFACE	28480	85662-60021
A3A7C1	0160-4084	8	12	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C2	0160-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X901592
A3A7C3	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C4	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C5	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C8	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C10	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C11	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C12	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C13	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A3A7C14	0160-2264	2	1	CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A3A7CR1	1901-0535	9	1	DIODE-SCHOTTKY	28480	1901-0535
A3A7E1	1460-1489	8	1	SPRING, WIREFORM (TEST JUMPER)	28480	1460-1489
A3A7E2	1258-0124	7	1	JUMPER-SINGLE POSITION(FOR IC SOCKET J1)	91506	8136-47561
A3A7J1	1200-0508	0		SOCKET-IC 14-CONT DIP-SLDR	28480	1200-0508
A3A7L1	08558-80011	6	1	FILTER, COIL, BLUE	28480	08558-80011
A3A7Q1	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A7R1	0698-7232	3	2	RESISTOR 681 1% .05W F TC=0+-100	24546	C3-1/8-T0-681R-G
A3A7R2	0698-7242	5	6	RESISTOR 1.78K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1781-G
A3A7R3	0698-7232	3		RESISTOR 681 1% .05W F TC=0+-100	24546	C3-1/8-T0-681R-G
A3A7R4	0698-7242	5		RESISTOR 1.78K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1781-G
A3A7R5	0698-7242	5		RESISTOR 1.78K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1781-G
A3A7R6	0698-7242	5		RESISTOR 1.78K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1781-G
A3A7R7	0698-7242	5		RESISTOR 1.78K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1781-G
A3A7R8	0698-7228	7	1	RESISTOR 464 1% .05W F TC=0+-100	24546	C3-1/8-T0-464R-G
A3A7R9	0698-7242	5		RESISTOR 1.78K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1781-G
A3A7S1	3101-2170	8	1	SWITCH, PUSHBUTTON SPDT MOM	28480	3101-2170
A3A7TP1	0360-0535	0	10	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP5	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP6	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP7	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP8	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP9	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7TP10	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A7U1	1820-1444	9	4	IC MUXR/DATA=SEL TTL LS 2-T0-1-LINE QUAD	01295	SN74LS298N
A3A7U2	1820-1491	6	5	IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A7U3	1820-1444	9		IC MUXR/DATA=SEL TTL LS 2-T0-1-LINE QUAD	01295	SN74LS298N
A3A7U4	1820-1444	9		IC MUXR/DATA=SEL TTL LS 2-T0-1-LINE QUAD	01295	SN74LS298N
A3A7U5	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A7U6	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A7U7	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A7U8	1820-1444	9		IC MUXR/DATA=SEL TTL LS 2-T0-1-LINE QUAD	01295	SN74LS298N
A3A7U9	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A7U10	1820-1199	1	1	IC INV TTL LS HEX 1-INP	01295	SN74LS04N
A3A7U11	1820-1202	7	2	IC GATE TTL LS NAND TPL 3-INP	01295	SN74LS10N
A3A7U12	1820-1202	7		IC GATE TTL LS NAND TPL 3-INP	01295	SN74LS10N
A3A7U13	1820-1416	5	1	IC SCHMITT-TRIG TTL LS INV HEX 1-INP	01295	SN74LS14N
A3A7U14	1820-1980	8	2	IC MUXR/DATA=SEL TTL S 8-INP	18324	N82S318
A3A7U15	1820-1980	8		IC MUXR/DATA=SEL TTL S 8-INP	18324	N82S318
A3A7U16	1820-1240	3	2	IC DCDR TTL S 3-T0-8-LINE 3-INP	01295	SN74S138N
A3A7U17	1820-1240	3		IC DCDR TTL S 3-T0-8-LINE 3-INP	01295	SN74S138N
A3A7U18	1820-0693	8	1	IC FF TTL S D-TYPE POS-EDGE=TRIG	01295	SN74S74N
A3A7U19	1810-0206	8	1	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R10K
A3A7U20	1820-1431	4	1	IC CNTR TTL LS DECD SYNCHRO	01295	SN74LS162N
A3A7U21	1820-1432	5	1	IC CNTR TTL LS BIN SYNCHRO POS-EDGE=TRIG	01295	SN74LS163N
A3A7VR1	1902-3036	3	1	DIODE-ZNR 3.16V 5% DO-7 PD=.4W TC=-.064%	28480	1902-3036
A3A7Y1	0410-0758	6	1	CRYSTAL, 15.824MHZ A3A7 MISCELLANEOUS PARTS	28480	0410-0758
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0755	2	2	EXTRACTOR-PC BOARD VIO POLYC	28480	4040-0755

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3AR	85662-60013	5	1	BOARD ASSEMBLY, ANALOG-DIGITAL CONVERTER	28480	85662-60013
A3ARC1	0180-0229	7	2	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A3ARC2	0180-1746	5	5	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X902082
A3ARC3	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X902082
A3ARC4	0180-0229	7		CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A3ARC5	0160-2055	9	12	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC6	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X902082
A3ARC7	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X902082
A3ARC8	0160-2260	8	1	CAPACITOR-FXD 13PF +-5% 500VDC CER 0+-30	28480	0160-2260
A3ARC9	0160-2199	2	1	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A3ARC10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC18	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X902082
A3ARC19	0160-0174	9	2	CAPACITOR-FXD .47UF +80-20% 25VDC CER	28480	0160-0174
A3ARC20	0160-0174	9		CAPACITOR-FXD .47UF +80-20% 25VDC CER	28480	0160-0174
A3ARC21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC22	0160-2055	9	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3ARC25	0160-2201	7	1	CAPACITOR-FXD 51PF +-5% 300VDC MICA	28480	0160-2201
A3ARC26	0160-0127	2	1	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3ARCR1	1901-0535	9	4	DIODE-SCHOTTKY	28480	1901-0535
A3ARCR2	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3ARCR3	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3ARCR4	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A3ABE1	1460-1489	8	1	WIREFORM, JUMPER	28480	1460-1489
A3ARJ1	1250-0543	8	1	CONNECTOR-RF SM-SNP M PC 50-OHM	28480	1250-0543
A3ARL1	9140-0114	4	4	COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A3ARL2	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A3ARL3	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A3ARL4	9140-0210	1	2	COIL-MLD 100UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0210
A3ARL5	9140-0210	1		COIL-MLD 100UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0210
A3ARL6	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A3ARR1	0698-3432	7	1	RESISTOR 26.1 1% .125W F TC=0+-100	03888	PME55-1/8-T0-26R1-F
A3ARR2	0757-0401	0	2	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A3ARR3	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0-196R-F
A3ARR4	0757-0439	4	3	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6811-F
A3ARR5	0698-3136	8	2	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1782-F
A3ARR6	0757-0279	0	2	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3ARR7	0757-0442	9	3	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A3ARR8	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1782-F
A3ARR9	2100-2850	8	1	RESISTOR-TRMR 10K 10% HW SIDE=ADJ 20-TRN	02660	3810P-103
A3ARR10	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A3ARR11	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6811-F
A3ARR12	0698-3429	2	1	RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A3ARR13	0698-3160	8	1	RESISTOR 31.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3162-F
A3ARR14	2100-3054	6	1	RESISTOR-TRMR 50K 10% C SIDE=ADJ 17-TRN	02111	43P503
A3ARR15				NOT ASSIGNED		
A3ARR16	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0-6811-F
A3ARR17	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A3ARR18	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A3ARR19	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A3ARR20	0698-3430	5	1	RESISTOR 21.5 1% .125W F TC=0+-100	03888	PME55-1/8-T0-21R5-F
A3ARTP1	0360-0535	0	7	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ARTP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ARTP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ARTP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ARTP5	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ARTP6	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ARTP7	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3ARU1	1820-1491	6	3	IC 8FR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3ARU2	1820-1196	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A3ARU3	1820-0223	0	2	IC 301 OP AMP TC=99	04713	MLM301AG
A3ARU4	1820-0475	4	1	IC COMPARATOR TC=99	27014	LM306M
A3ARU5	1826-0448	3	1	IC-DIGITAL-ANALOG CONV 7520	28480	1826-0448

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A8U6	1820-0223	0		IC 301 OP AMP TO-99	04713	MLM301AG
A3A8U7	1820-1282	3	1	IC FF TTL LS J-K BAR POS=EDGE-TRIG	01295	SN74LS109N
A3A8U8 (PREFERRED)	1820-1720	4	1	IC RGTR TTL 12-BIT	03406	DM2504CN
A3A8U8 (ALTERNATE)	1820-1978	4		IC RGTR TTL 12-BIT	34335	AM25L04PC
A3A8U9	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A8U10	1820-1196	8		IC FF TTL LS D-TYPE POS=EDGE-TRIG COM	01295	SN74LS174N
A3A8U11	1906-0202	7	1	DIODE-ARRAY 40V 400MA	01295	TID130
A3A8U12	1826-0116	2	1	IC COMPARATOR TO-99	06665	CMP-01-CJ
A3A8U13	1820-1984	2	1	IC 561 CONV 16-DIP-C	24355	AD561KD
A3A8U14	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A3A8U15	1902-0908	2	1	DIODE-ZNR 6.95V 5% TC=+.0002%	27014	LM399H
A3A8VR1	1902-3036	3	1	DIODE-ZNR 3.16V 5% DO-7 PD=.4W TC=-.064%	28480	1902-3036
				A3A8 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN=DIA .25-IN=LG BE-CU	28480	1480-0073
	4040-0747	2	2	EXTRACTOR-PC BOARD GRA POLYC	28480	4040-0747

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A9	85662-60012	4	1	BOARD ASSEMBLY, TRACK AND HOLD	28480	85662-60012
A3A9C1	0160-0127	2	4	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A9C2	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A9C3	0180-1746	5	2	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020H2
A3A9C4	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020H2
A3A9C5	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A9C6	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A3A9C7	0180-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X9010B2
A3A9C8	0160-2055	9	22	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C9	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C11	0180-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A3A9C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C13	0160-3456	6	2	CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A3A9C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C15*	0160-3536	2	1	CAPACITOR-FXD 620PF +-5% 100VDC MICA	28480	0160-3536
A3A9C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C18	0160-2204	0	2	CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A3A9C19	0160-2204	0		CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A3A9C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C22	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C23	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A3A9C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C26	0160-0945	2	2	CAPACITOR-FXD 910PF +-5% 100VDC MICA	28480	0160-0945
A3A9C27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C28				NOT ASSIGNED		
A3A9C29				NOT ASSIGNED		
A3A9C30	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C31	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C32	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C33	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C35	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C36	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C37	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C38	0160-0945	2		CAPACITOR-FXD 910PF +-5% 100VDC MICA	28480	0160-0945
A3A9C39	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A3A9C40	0160-3879	7	2	CAPACITOR FXD .1UF 100VDC CER	28480	0160-3879
A3A9C41	0160-3879	7		CAPACITOR FXD .1UF 100VDC CER	28480	0160-3879
A3A9C42	0160-2203	9	1	CAPACITOR FXD 91PF 300VDC MIC	28480	0160-2203
A3A9CR1	1901-0376	6	2	DIODE-GEN PRP 35V 50MA DO-7	28480	1901-0376
A3A9CR2	1901-0376	6		DIODE-GEN PRP 35V 50MA DO-7	28480	1901-0376
A3A9CR3	1901-0535	9	1	DIODE-SCHOTTKY	28480	1901-0535
A3A9CR4	1901-0033	2	1	DIODE-GEN PRP 180V .2A DO-7	28480	1901-0033
A3A9J1	1250-0543	8	2	CONNECTOR-RF SM-SNP M PC 50-OHM	05761	51-053-0090
A3A9J2	1250-0543	8		CONNECTOR-RF SM-SNP M PC 50-OHM	05761	51-053-0000
A3A9L1	9140-0096	1	1	COIL-MLD 1UH 10% Q=50 .155DX .375 LG	02178	15-4425-6K
A3A9L2	9100-1629	4	2	COIL-MLD 47UH 5% Q=55 .155DX .375LG	02178	15-1315-4J
A3A9L3	9100-1629	4		COIL-MLD 47UH 5% Q=55 .155DX .375LG	02178	15-1315-4J
A3A9L4	9140-0210	1	1	COIL-MLD 100UH 5% Q=50 .155DX .375LG	02178	15-1315-12J
A3A9Q1	1853-0075	9	2	TRANSISTOR-DUAL PNP PD=400MW	28480	1853-0075
A3A9Q2	1854-0475	5	4	TRANSISTOR-DUAL NPN PD=750MW	28480	1854-0475
A3A9Q3	1854-0475	5		TRANSISTOR-DUAL NPN PD=750MW	28480	1854-0475
A3A9Q4	1855-0050	4	3	TRANSISTOR-JFET DUAL N-CHAN D-MODE SI	28480	1855-0050
A3A9Q5	1854-0019	3	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A3A9Q6	1855-0241	5	2	TRANSISTOR MOSFET N-CHAN E-MODE TO-72 SI	18324	80215
A3A9Q7	1853-0316	1	1	TRANSISTOR-DUAL PNP PD=500MW	28480	1853-0316
A3A9Q8	1853-0075	9		TRANSISTOR-DUAL PNP PD=400MW	28480	1853-0075
A3A9Q9	1853-0034	0	1	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A3A9Q10	1854-0475	5		TRANSISTOR-DUAL NPN PD=750MW	28480	1854-0475
A3A9Q11	1855-0050	4		TRANSISTOR-JFET DUAL N-CHAN D-MODE SI	28480	1855-0050
A3A9Q12	1853-0322	9	1	TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A3A9Q13	1855-0050	4		TRANSISTOR-JFET DUAL N-CHAN D-MODE SI	28480	1855-0050
A3A9Q14	1855-0241	5		TRANSISTOR MOSFET N-CHAN E-MODE TO-72 SI	18324	80215
A3A9Q15	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A3A9Q16	1854-0475	5		TRANSISTOR-DUAL NPN PD=750MW	28480	1854-0475
A3A9R1	0698-3441	8	3	RESISTOR 215 1% .125W F TC=0+-100	24546	C4=1/8-T0=215W-F
A3A9R2	0698-3440	7	4	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196R-F
A3A9R3	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A3A9R4	0757-0438	3	4	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A3A9R5	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A9R6	0757-0280	3	6	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A3A9R7	0757-0274	5	2	RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1213-F
A3A9R8	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1961-F
A3A9R9	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A3A9R10	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A3A9R11	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A3A9R12	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A3A9R13	0757-0465	6	2	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1003-F
A3A9R14	0757-0279	0	4	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A3A9R15	0698-3157	3	7	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A3A9R16	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A3A9R17	0698-3439	4	1	RESISTOR 178 1% .125W F TC=0+-100	24546	C4-1/8-T0=178R-F
A3A9R18	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A3A9R19	2100-3053	5	1	RESISTOR-TRMR 20 20% C SIDE=ADJ 17-TRN	02111	43P200
A3A9R20	0698-3441	8		RESISTOR 215 1% .125W F TC=0+-100	24546	C4-1/8-T0=215R-F
A3A9R21	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A3A9R22	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A3A9R23	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A3A9R24	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A3A9R25	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A3A9R26	0757-0274	5		RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1213-F
A3A9R27	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A3A9R28	0757-0416	7	2	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A3A9R29	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A3A9R30	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A3A9R31	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A3A9R32	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A3A9R33	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A3A9R34	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2151-F
A3A9R35	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A3A9R36	2100-3161	6	3	RESISTOR-TRMR 20K 10% C SIDE=ADJ 17-TRN	02111	43P203
A3A9R37	0698-3160	8	2	RESISTOR 31.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3162-F
A3A9R38	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A3A9R39	2100-3052	4	2	RESISTOR-TRMR 50 20% C SIDE=ADJ 17-TRN	02111	43P500
A3A9R40	0698-3136	8	2	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1782-F
A3A9R41	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A3A9R42	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A3A9R43	0698-3160	8		RESISTOR 31.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3162-F
A3A9R44	2100-3161	6		RESISTOR-TRMR 20K 10% C SIDE=ADJ 17-TRN	02111	43P203
A3A9R45	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A3A9R46	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1782-F
A3A9R47	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A3A9R48	0757-0289	2	1	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=1332-F
A3A9R49	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0=7501-F
A3A9R50	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1471-F
A3A9R51	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A3A9R52	2100-3052	4		RESISTOR-TRMR 50 20% C SIDE=ADJ 17-TRN	02111	43P500
A3A9R53	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2611-F
A3A9R54	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A3A9R55	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A3A9R56	0757-0422	5	1	RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0=909R-F
A3A9R57	2100-3095	5	1	RESISTOR-TRMR 200 10% C SIDE=ADJ 17-TRN	02111	43P201
A3A9R58	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1003-F
A3A9R59	2100-3161	6		RESISTOR-TRMR 20K 10% C SIDE=ADJ 17-TRN	02111	43P203
A3A9R60	0757-0288	1	1	RESISTOR 9.09K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=9091-F
A3A9R61	0757-0441	8	1	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0=8251-F
A3A9R62				NOT ASSIGNED		
A3A9R63				NOT ASSIGNED		
A3A9R64	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A3A9R65	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A3A9R66	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A3A9R67	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A3A9R68	0757-0417	8	1	RESISTOR 562 1% .125W F TC=0+-100	24546	C4-1/8-T0=562R-F
A3A9R69	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A3A9R70	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A3A9TP1	0360-0535	0	10	TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP2	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP3	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP4	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP5	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP6	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP7	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP8	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP9	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION
A3A9TP10	0360-0535	0		TERMINAL TEST POINT PCB	00000	ORDER BY DESCRIPTION

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A9U1	1826-0415	4	1	IC SWITCH 16-DIP-P	18324	SD5000B
A3A9U2	1810-0207	9	1	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R22K
A3A9U3	1810-0037	3	1	NETWORK-RES 16-PIN-DIP .1-PIN-SPCG	28480	1810-0037
A3A9U4	1826-0026	3	2	IC 311 COMPARATOR TO-99	04713	MLM311G
A3A9U5	1826-0026	3	1	IC 311 COMPARATOR TO-99	04713	MLM311G
A3A9U6	1826-0089	8	1	IC 2525 OP AMP TO-99	29832	1322
A3A9U7	1810-0205	7	1	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R4.7K
A3A9U8	1820-0471	0	1	IC INV TTL HEX 1-INP	01295	SN7406N
A3A9U9	1820-1281	2	1	IC DCDR TTL LS 2-TO-4-LINE DUAL 2-INP	01295	SN74LS139N
A3A9U10	1820-1202	7	1	IC GATE TTL LS NAND TPL 3-INP	01295	SN74LS10N
A3A9U11	1820-1197	9	1	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS00N
A3A9U12	1820-1423	4	1	IC MV TTL LS MONOSTBL RETRIG DUAL	01295	SN74LS123N
A3A9U13	1820-1112	8	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS74N
A3A9U14	1826-0021	8	1	IC OP AMP LM310	28480	1826-0021
				A3A9 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0756	3	2	EXTRACTOR-PC BOARD WHT POLYC	28480	4040-0756

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A3A10	85662-60015	7	1	BOARD ASSEMBLY, DIGITAL STORAGE MOTHER BD (INCLUDES W2 AND W3)	28480	85662-60015
A3A10J1	1200-0508	0	1	SOCKET-IC 14-CONT DIP-SLDR	28480	1200-0508
A3A10J2	1251-4827	1	1	CONNECTOR 50-PIN M POST TYPE	28480	1251-4827
A3A10J3	1251-5816	0	1	CONNECTOR 4-PIN M POST TYPE	28480	1251-5816
A3XA1P1	1251-2026	8	14	CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA1P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA2P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA2P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA3P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA3P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA4P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA5P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA6P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA6P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA7P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA7P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA8P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026
A3XA9P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026

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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A1	#5662-60011	3	1	BOARD ASSEMBLY, VIDEO PROCESSOR	28480	85662-60011
A4A1C1	0160-0197	8	2	CAPACITOR-FXD 2,2UF +-10% 20VDC TA	56289	150D225X9020A2
A4A1C2	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C3	0160-0197	8	8	CAPACITOR-FXD 2,2UF +-10% 20VDC TA	56289	150D225X9020A2
A4A1C4	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C5	0160-0945	2	1	CAPACITOR-FXD 910PF +-5% 100VDC MICA	28480	0160-0945
A4A1C6	0160-0155	6	1	CAPACITOR-FXD 3300PF +-10% 200VDC POLYE	28480	0160-0155
A4A1C7	0160-0161	6	1	CAPACITOR-FXD .01UF +-10% 200VDC POLYE	28480	0160-0161
A4A1C8	0160-0163	6	1	CAPACITOR-FXD .033UF +-10% 200VDC POLYE	28480	0160-0163
A4A1C9	0160-0168	1	1	CAPACITOR-FXD .1UF +-10% 200VDC POLYE	28480	0160-0168
A4A1C10	0160-2205	3	1	CAPACITOR-FXD .33UF +-10% 35VDC TA	56289	150D334X9035A2
A4A1C11	0160-0291	3	1	CAPACITOR-FXD 1UF +-10% 35VDC TA	56289	150D105X9035A2
A4A1C12	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C13				NOT ASSIGNED		
A4A1C14	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C15	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C16	0160-0228	6	2	CAPACITOR-FXD 22UF +-10% 15VDC TA	56289	150D226X9015B2
A4A1C17	0160-0229	7	1	CAPACITOR-FXD 33UF +-10% 10VDC TA	56289	150D336X9010B2
A4A1C18	0160-0228	6	6	CAPACITOR-FXD 22UF +-10% 15VDC TA	56289	150D226X9015B2
A4A1C19	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C20	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C21	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C22	0160-2055	9	9	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A1C23	0140-0195	2	1	CAPACITOR-FXD 130PF +-5% 300VDC MICA	72136	DM15F131J0300MV1CR
A4A1C31	1901-0535	9	1	DIODE-SCHOTTKY	28480	1901-0535
A4A1C32	1901-0179	7	2	DIODE-SWITCHING 15V 50MA 750PS DO-7	28480	1901-0179
A4A1C33	1901-0179	7	7	DIODE-SWITCHING 15V 50MA 750PS DO-7	28480	1901-0179
A4A1J1	1250-0690	6	4	CONNECTOR-RF SMB M SGL-MOLE-FR 50-OHM	28480	1250-0690
A4A1J2	1250-0690	6	6	CONNECTOR-RF SMB M SGL-MOLE-FR 50-OHM	28480	1250-0690
A4A1J3	1250-0690	6	6	CONNECTOR-RF SMB M SGL-MOLE-FR 50-OHM	28480	1250-0690
A4A1J4	1250-0690	6	6	CONNECTOR-RF SMB M SGL-MOLE-FR 50-OHM	28480	1250-0690
A4A1L1	9140-0114	4	2	COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A4A1L2	9140-0114	4	4	COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A4A1L3	9100-1618	1	3	COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4A1L4	9100-1618	1	1	COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4A1L5	9100-1618	1	1	COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4A1Q1	1853-0281	9	5	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A1Q2	1854-0404	0	12	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q3	1855-0050	4	1	TRANSISTOR-JFET DUAL N-CHAN D-MODE SI	28480	1855-0050
A4A1Q4	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q5	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q6	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q7	1855-0213	1	1	TRANSISTOR-JFET DUAL N-CHAN D-MODE TO-78	28480	1855-0213
A4A1Q8	1853-0316	1	1	TRANSISTOR-DUAL PNP PD=500MW	28480	1853-0316
A4A1Q9	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q10	1853-0281	9	9	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A1Q11	1853-0281	9	9	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A1Q12	1853-0281	9	9	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A1Q13	1853-0281	9	9	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A1Q14	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q15	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q16	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q17	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q18	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q19	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1Q20	1854-0404	0	0	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A1R1	0698-3155	1	9	RESISTOR 4.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4641-F
A4A1R2	2100-3109	2	1	RESISTOR-TMR 2K 10% C SIDE-ADJ 17-TRN	02111	43P202
A4A1R3	0698-3151	7	1	RESISTOR 2.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2871-F
A4A1R4	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A1R5	0698-6880	5	1	RESISTOR 16K .5% .125W F TC=0+-50	28480	0698-6880
A4A1R6	0757-0442	9	3	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A1R7	0698-6755	3	2	RESISTOR 8K .5% .125W F TC=0+-50	24546	NC4-1/8-T2=8001-D
A4A1R8	0757-0442	9	9	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A1R9	0698-6755	3	3	RESISTOR 8K .5% .125W F TC=0+-50	24546	NC4-1/8-T2=8001-D
A4A1R10	0757-0290	5	2	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4A1R11	0757-0442	9	9	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A1R12	0757-0418	9	1	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A4A1R13	0757-0280	3	2	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A1R14	2100-3123	0	1	RESISTOR-TMR 500 10% C SIDE-ADJ 17-TRN	02111	43P501
A4A1R15	0698-0684	9	7	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A1R16	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A4A1R17	0698-3452	1	1	RESISTOR 147K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1473-F
A4A1R18	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R19	0698-3158	4	5	RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2372-F
A4A1R20	0698-3158	4		RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2372-F
A4A1R21	0698-3240	5	2	RESISTOR 500 .25% .125W F TC=0+-50	28480	0698-3240
A4A1R22	0698-7799	7	3	RESISTOR 2K .25% .125W F TC=0+-100	19701	MF4C1/8-T0=2001-C
A4A1R23	0698-7799	7		RESISTOR 2K .25% .125W F TC=0+-100	19701	MF4C1/8-T0=2001-C
A4A1R24	0698-7839	6	1	RESISTOR 222 .5% .125W F TC=0+-50	19701	MF4C1/8-T2=222R-D
A4A1R25	0698-3240	5		RESISTOR 500 .25% .125W F TC=0+-50	28480	0698-3240
A4A1R26	0698-7799	7		RESISTOR 2K .25% .125W F TC=0+-100	19701	MF4C1/8-T0=2001-C
A4A1R27	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A4A1R28	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A4A1R29	0757-0200	7	1	RESISTOR 5.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5621-F
A4A1R30	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A4A1R31	0698-3444	1	1	RESISTOR 316 1% .125W F TC=0+-100	24546	C4=1/8-T0=316R-F
A4A1R32	2100-3122	9	1	RESISTOR-TRMR 100 10% C SIDE=ADJ 17-TRN	02111	43P101
A4A1R33	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2371-F
A4A1R34	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A4A1R35	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R36	2100-3154	7	1	RESISTOR-TRMR 1K 10% C SIDE=ADJ 17-TRN	02111	43P102
A4A1R37	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A4A1R38	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A4A1R39	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A4A1R40	0698-0085	0	2	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A4A1R41	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A4A1R42	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A4A1R43	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R44	0698-3158	4		RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2372-F
A4A1R45	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R46	0698-3158	4		RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2372-F
A4A1R47	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R48	0698-3158	4		RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2372-F
A4A1R49	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A4A1R50	0698-5577	5	1	RESISTOR 2.5K .5% .125W F TC=0+-100	24546	C4=1/8-T0=2501-D
A4A1R51	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A4A1R52	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R53	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R54	0698-3445	2	1	RESISTOR 348 1% .125W F TC=0+-100	24546	C4=1/8-T0=348R-F
A4A1R55	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A4A1R56	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A4A1R57	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A4A1R58	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A4A1TP1	1251-0600	0	3	CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A4A1TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A4A1TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A4A1U1	1826-0092	3	1	IC OP AMP TO-99	28480	1826-0092
A4A1U2	1826-0089	8	1	IC 2525 OP AMP TO-99	29832	1322
A4A1U3	1826-0021	8	1	IC OP AMP TO-99	27014	LM310M
A4A1U4	1826-0417	6	1	IC SWITCH 16-DIP-C	27014	NP1333D
A4A1U5	1810-0215	9	1	NETWORK-RES 8-PIN-SIP ,1-PIN-SPCG	11236	750-81-R75K
A4A1U6	1826-0261	8	1	IC 741 OP AMP TO-99	28480	1826-0261
A4A1U7	1826-0154	8	1	IC 9M CMOS 2-CHAN ANAL	17856	OG2008A
A4A1U8	1820-1216	3	1	IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	SN74LS138N
A4A1U9	1810-0205	7	1	NETWORK-RES 8-PIN-SIP 4.7K OHM X7	02483	750-81-R4.7K
A4A1U10	1820-1200	5	1	IC INV TTL LS HEX	01295	SN74LS05N
A4A1U11	1820-1272	1	1	IC BFR TTL LS NOR QUAD 2-INP	01295	SN74LS33N
A4A1VR1	1902-0686	3	1	DIODE-ZNR 1N825 6.2V 2% DO-7 PDS,4W	04713	1N825
				A4A1 MISCELLANEOUS PARTS		
	86701-40001	9	2	EXTRACTOR, PC BOARD	28480	86701-40001

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A2 (NEW)	85662-60096	4	1	LOG AMPLIFIER ASSEMBLY (INCLUDES A4A2 AND A4A3) RESTORED 85662-60096	28480	85662-60096
A4A2 (RESTORED)	85662-60097	5			28480	85662-60097
A4A2C1				NOT ASSIGNED		
A4A2C2				NOT ASSIGNED		
A4A2C3	0160-2055	9	50	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C4	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C5	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C6	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C7	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C8	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C9	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C18	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C19	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C22	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C26	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C29	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C30	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C31				NOT ASSIGNED		
A4A2C32	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C33	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C35				NOT ASSIGNED		
A4A2C36	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C37	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C38	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C39	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C40	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C41	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C42	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C43	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C44	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A2C45				NOT ASSIGNED		
A4A2C46	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C47				NOT ASSIGNED		
A4A2C48	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C49	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C50	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C51	0160-2262	0	1	CAPACITOR-FXD 16PF +-5% 500VDC CER 0+-30	28480	0160-2262
A4A2C52	0160-2200	6	1	CAPACITOR-FXD 43PF +-5% 300VDC MICA	28480	0160-2200
A4A2C53	0160-2307	4	1	CAPACITOR-FXD 47PF +-5% 300VDC MICA	28480	0160-2307
A4A2C54	0160-2205	1	1	CAPACITOR-FXD 120PF +-5% 300VDC MICA	28480	0160-2205
A4A2C55	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C56				NOT ASSIGNED		
A4A2C57				NOT ASSIGNED		
A4A2C58				NOT ASSIGNED		
A4A2C59	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C60				NOT ASSIGNED		
A4A2C61				NOT ASSIGNED		
A4A2C62	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C63	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C64	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C65	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C66	0180-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D228x901582
A4A2C67				NOT ASSIGNED		
A4A2C68	0160-4297	5	7	CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22-C0M
A4A2C69	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22-C0M
A4A2C70	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22-C0M

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A2C71	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232S22=CDM
A4A2C72	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232S22=CDM
A4A2C73	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232S22=CDM
A4A2C74	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A2C75	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232S22=CDM
A4A2CR1				NOT ASSIGNED		
A4A2CR2				NOT ASSIGNED		
A4A2CR3				NOT ASSIGNED		
A4A2CR4	1901-1085	6	8	DIODE-SCHOTTKY	28480	1901-1085
A4A2CR5	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A2CR6	1901-1070	9	8	DIODE-IPIN	28480	1901-1070
A4A2CR7	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A2CR8	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A2CR9	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A2CR10	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A2CR11	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A2CR12	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A2CR13	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A2CR14	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A2CR15	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A2CR16	1901-0047	8	11	DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR17	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR18	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR19	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR20	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR21	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR22				NOT ASSIGNED		
A4A2CR23				NOT ASSIGNED		
A4A2CR24				NOT ASSIGNED		
A4A2CR25				NOT ASSIGNED		
A4A2CR26	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A2CR27	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A2CR28	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A2CR29	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A2CR30	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR31	1910-0016	0	3	DIODE-GE 60V 60MA 1US 00-7	28480	1910-0016
A4A2CR32	1910-0016	0		DIODE-GE 60V 60MA 1US 00-7	28480	1910-0016
A4A2CR33	1910-0016	0		DIODE-GE 60V 60MA 1US 00-7	28480	1910-0016
A4A2CR34				NOT ASSIGNED		
A4A2CR35	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR36	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR37	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2CR38	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A2E1	9170-0029	3	8	CORE-SHIELDING BEAD	28480	9170-0029
A4A2E2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A2E3	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A2E4	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A2E5	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A2E6	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A2E7	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A2E8	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A2J1	1250-0690	6	2	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
A4A2J2	1250-0690	6		CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
A4A2L1	9140-1618	1	4	COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9140-1618
A4A2L2	9140-0105	3	5	COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A2L3	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A2L4	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A2L5	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A2L6	9100-1623	8	2	COIL-MLD 27UH 5% Q#60 .155DX.375LG-NOM	28480	9100-1623
A4A2L7	9100-1623	8		COIL-MLD 27UH 5% Q#60 .155DX.375LG-NOM	28480	9100-1623
A4A2L8	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A2L9	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A2L10	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A2L11				NOT ASSIGNED		
A4A2L12	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A2L13	9140-0114	4	1	COIL-MLD 10UH 10% Q#55 .155DX.375LG-NOM	28480	9140-0114
A4A2L14	9140-0178	0	1	COIL-MLD 12UH 10% Q#65 .155DX.375LG-NOM	28480	9140-0178
A4A2Q1	1853-0075	9	1	TRANSISTOR-DUAL PNP PD#400MW	28480	1853-0075
A4A2Q2	1854-0345	8	2	TRANSISTOR NPN 2N5179 SI TO-72 PD#200MW	04713	2N5179
A4A2Q3	1853-0015	7	1	TRANSISTOR PNP SI PD#200MW FT#50GMHZ	28480	1853-0015
A4A2Q4	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD#200MW	04713	2N5179
A4A2Q5	1853-0405	9	1	TRANSISTOR PNP 2N4209 SI TO-18 PD#300MW	28480	1853-0405
A4A2Q6	1854-0019	3	10	TRANSISTOR NPN SI TO-18 PD#360MW	28480	1854-0019
A4A2Q7	1853-0281	9	1	TRANSISTOR PNP 2N2907A SI TO-18 PD#400MW	04713	2N2907A
A4A2Q8	1854-0404	0	4	TRANSISTOR NPN SI TO-18 PD#360MW	28480	1854-0404
A4A2Q9	1854-0404	0		TRANSISTOR NPN SI TO-18 PD#360MW	28480	1854-0404
A4A2Q10	1854-0404	0		TRANSISTOR NPN SI TO-18 PD#360MW	28480	1854-0404

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A2Q11	1854-0637	1	1	TRANSISTOR NPN 2N2219A SI TO-18 PD=800MW	28480	1854-0637
A4A2Q12	1854-0475	5	1	TRANSISTOR-DUAL NPN PD=750MW	28480	1854-0475
A4A2Q13	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A2Q14	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q15	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q16	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q17	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q18	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q19	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q20	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q21	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2Q22	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A2R1	0757-0346	2	9	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A2R2	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A2R3	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A2R4	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A2R5	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R6	0757-0279	0	14	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R7	0757-0402	1		RESISTOR 110 1% .125W F TC=0+-100	24546	C4-1/8-T0-111-F
A4A2R8	0698-3136	8	8	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R9	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R10	0698-3444	1	5	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A2R11	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R12	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R13	0757-0280	3	6	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A2R14	2100-3161	6	1	RESISTOR-TRMR 20K 10% C SIDE-ADJ 17-TRN	02111	43P203
A4A2R15	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R16	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R17	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A2R18*	0757-0402	1	2	RESISTOR 110 1% .125W F TC=0+-100	24546	C4-1/8-T0-111-F
A4A2R19	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R20	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R21	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R22	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R23	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R24*	0757-0439	4	11	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R25	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R26	0698-3438	3	1	RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0-147R-F
A4A2R27	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R28	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R29	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A2R30	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R31	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R32	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R33				NOT ASSIGNED		
A4A2R34	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R35	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1471-F
A4A2R36*	0698-3438	3	1	RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0-147R-F
A4A2R37	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R38	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R39	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A2R40	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R41	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A2R42	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R43	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R44	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A2R45	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A2R46	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A2R47	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A2R48	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A2R49	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A2R50	0757-0442	9	14	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A2R51				NOT ASSIGNED		
A4A2R52				NOT ASSIGNED		
A4A2R53				NOT ASSIGNED		
A4A2R54				NOT ASSIGNED		
A4A2R55				NOT ASSIGNED		
A4A2R56	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A4A2R57	0757-0458	7	2	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A4A2R58	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A2R59	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A2R60	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A2R61	2100-1972	3	1	RESISTOR-TRMR 20K 10% HW SIDE-ADJ 20-TRN	02060	3810P-203
A4A2R62*	0698-3444	6	1	RESISTOR 20.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2072-F
A4A2R63	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A2R64	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A2R65	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A2R66	0757-0442	9	3	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R67	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A4A2R68				NOT ASSIGNED		
A4A2R69	0698-3437	2	1	RESISTOR 133 1% .125W F TC=0+-100	24546	C4-1/8-T0=133R-F
A4A2R70	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A2R71	0698-3446	3	1	RESISTOR 383 1% .125W F TC=0+-100	24546	C4-1/8-T0=383R-F
A4A2R72	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R73	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A2R74	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A2R75	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A4A2R76	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A4A2R77	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R78	0757-0444	1		RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1212-F
A4A2R79	2100-3103	6		RESISTOR-TRMR 10K 10% C SIDE-ADJ 17-TRN	02111	43P103
A4A2R80	0757-0440	7		RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0=7501-F
A4A2R81	0757-0279	0	1	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A2R82	0698-3442	9		RESISTOR 237 1% .125W F TC=0+-100	24546	C4-1/8-T0=237R-F
A4A2R83	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A2R84	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0=6811-F
A4A2R85	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A4A2R86*	0698-3155	1	1	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4641-F
A4A2R87	0698-3152	8		RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3481-F
A4A2R88*	0698-3158	4		RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2372-F
A4A2R89*	0698-3454	3		RESISTOR 215K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2153-F
A4A2R90	0757-0458	7		RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5112-F
A4A2R91	2100-2852	0	1	RESISTOR-TRMR 1K 10% WW SIDE-ADJ 20-TRN	02660	3810P-102
A4A2R92	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A4A2R93	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A2R94	0683-0275	9		RESISTOR 2.7 5% .25W FC TC=400/+500	01121	C827G5
A4A2R95	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3831-F
A4A2R96*	0698-3161	9	1	RESISTOR 38.3K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3832-F
A4A2R97*	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A2R98	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3831-F
A4A2R99*	0757-0461	2		RESISTOR 68.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=6812-F
A4A2R100	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R101	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A2R102	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R103	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1003-F
A4A2R104	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R105	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A2R106	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A4A2R107	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R108	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R109	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R110	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A2R111	0757-0123	3	1	RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A4A2R112	0757-0395	1		RESISTOR 56.2 1% .125W F TC=0+-100	24546	C4-1/8-T0=5622-F
A4A2R113	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A2R114	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A4A2R115	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A2TP1	1251-0600	0	8	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2TP6	1251-0600	0	1	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A4A2U1	1826-0092	3	1	IC OP AMP TO-99	28480	1826-0092
A4A2VR1	1902-0126	6		DIODE-ZNR 2.61V 5% DO-7 PD=.4W TC=-.072X	28480	1902-0126
A4A2VR2	1902-0041	4		DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009X	28480	1902-0041
A4A2VR3	1902-0126	6		DIODE-ZNR 2.61V 5% DO-7 PD=.4W TC=-.072X	28480	1902-0126
				A4A2 MISCELLANEOUS PARTS		
86701-40001		9	1	EXTRACTOR, PC BOARD	28480	86701-40001

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A3 (NEW)	85662-60096	4	1	LOG AMPLIFIER (INCLUDES A4A2 & A4A3)	28480	85662-60096
A4A3 (RESTORED)	85662-60097	5		RESTORED 85662-60096	28480	85662-60097
A4A3C1	0160-2055	9	46	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C2	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C3	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C4	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C5	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C6	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C7	0160-2244	8	1	CAPACITOR-FXD 3PF +/- .25PF 500VDC CER	28480	0160-2244
A4A3C8	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C9	0160-2236	8	2	CAPACITOR-FXD 1PF +/- .25PF 500VDC CER	28480	0160-2236
A4A3C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C18	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C19	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C21				NOT ASSIGNED		
A4A3C22				NOT ASSIGNED		
A4A3C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C26	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C29	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C30				NOT ASSIGNED		
A4A3C31	0160-4297	5	6	CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z822=CDM
A4A3C32	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z822=CDM
A4A3C33	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C35				NOT ASSIGNED		
A4A3C36				NOT ASSIGNED		
A4A3C37	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z822=CDM
A4A3C38	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C39	0160-2255	1	1	CAPACITOR-FXD 8.2PF +/- .25PF 500VDC CER	28480	0160-2255
A4A3C40	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C41	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z822=CDM
A4A3C42	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C43	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C44	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C45	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C46	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C47	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C48	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C49	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C50	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C51*	0160-3534	1	1	CAPACITOR-FXD 510PF +/-5% 100VDC MICA	28480	0160-3534
A4A3C52*	0160-2252	8	2	CAPACITOR-FXD 6.2PF +/- .25 PF 500VDC CER	28480	0160-2252
A4A3C53*	0160-0839	3	1	CAPACITOR-FXD 110PF +/-1% 300VDC MICA	28480	0160-0839
A4A3C54	0160-0455	9	1	CAPACITOR-FXD 18PF +/-2% 600VDC CER	28480	0160-0455
A4A3C55	0121-0493	3	1	CAPACITOR-V AIR DIEL 1.7-11PF 250V	74970	187-0306-105
A4A3C56	0160-2251	7	1	CAPACITOR-FXD 5.6PF +/- .25PF 500VDC CER	28480	0160-2251
A4A3C57	0160-2236	8		CAPACITOR-FXD 1PF +/- .25PF 500VDC CER	28480	0160-2236
A4A3C58	0160-2262	0	1	CAPACITOR-FXD 16PF +/-5% 500VDC CER 0+30	28480	0160-2262
A4A3C59	0160-2252	8		CAPACITOR-FXD 6.2PF +/- .25PF 500VDC CER	28480	0160-2252
A4A3C60				NOT ASSIGNED		
A4A3C61	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C62	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C63	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C64				NOT ASSIGNED		
A4A3C65	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C66	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z822=CDM
A4A3C67	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C68	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C69	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A3C70	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A3C71	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z922=CDM
A4A3CR1	1901-0047	8	7	DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A3CR2	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A3CR3	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A3CR4	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A3CR5	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A3CR6	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A3CR7	1901-1085	6	20	DIODE-SCHOTTKY	28480	1901-1085
A4A3CR8	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR9	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR10	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR11	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR12	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR13	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR14	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR15	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR16	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR17	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR18	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR19	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR20	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR21	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR22	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR23	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR24	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR25	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR26	1901-1085	6		DIODE-SCHOTTKY	28480	1901-1085
A4A3CR27	1901-1070	9	4	DIODE-PIPIN	28480	1901-1070
A4A3CR28	1901-1070	9		DIODE-PIPIN	28480	1901-1070
A4A3CR29	1901-1070	9		DIODE-PIPIN	28480	1901-1070
A4A3CR30	1901-1070	9		DIODE-PIPIN	28480	1901-1070
A4A3CR31	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A3E1	9170-0029	3	12	CORE-SHIELDING BEAD	28480	9170-0029
A4A3E2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E3	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E4	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E5	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E6	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E7	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E8	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E9	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E10	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E11	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3E12	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A3L1	9140-0105	3	6	COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A3L2	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A3L3	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A3L4	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A3L5	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A3L6	9100-1618	1	6	COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A3L7	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A3L8	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A3L9	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A3L10	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A3L11	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A3L12	9100-1623	8	1	COIL-MLD 27UH 5% Q#60 .155DX.375LG-NOM	28480	9100-1623
A4A3L13	9140-0105	3		COIL-MLD 8.2UH 10% Q#50 .155DX.375LG-NOM	28480	9140-0105
A4A3L14	9100-3854	1	1	COIL 400NH 5% Q#150 .3DX1.016LG-NOM	28480	9100-3854
A4A3L15	9140-0111	1	1	COIL-MLD 3.3UH 10% Q#33 .155DX.375LG-NOM	28480	9140-0111
A4A3L16	9140-0098	3	1	COIL-MLD 2.2UH 10% Q#33 .155DX.375LG-NOM	28480	9140-0098
A4A3Q1	1854-0345	8	1	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4A3Q2	1853-0007	7	3	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A3Q3	1854-0019	3	11	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q4	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q5	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A3Q6	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q7	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q8	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q9	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q10	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q11	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q12	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q13	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q14	1854-0546	1	1	TRANSISTOR NPN SI TO-72 PD=200MW	28480	1854-0546
A4A3Q15	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A3Q16	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A3Q17	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A3Q18	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A3Q19	1853-0405	9	1	TRANSISTOR PNP 2N4209 SI TO-18 PD=300MW	28480	1853-0405
A4A3R1				NOT ASSIGNED		
A4A3R2	0757-0346	2	6	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A3R3				NOT ASSIGNED		
A4A3R4	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A3R5	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A3R6	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A3R7	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A3R8	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A3R9	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A3R10	0698-3444	1	7	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A3R11	0698-3439	4	3	RESISTOR 178 1% .125W F TC=0+-100	24546	C4-1/8-T0-178R-F
A4A3R12	0698-3429	2	2	RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A4A3R13	0757-0279	0	11	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R14	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R15*	0757-0316	6	1	RESISTOR 42.2 1% .125W F TC=0+-100	24546	C4-1/8-T0-42R2-F
A4A3R16	0698-0084	9	3	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4A3R17	0698-3151	7	2	RESISTOR 2.87K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2871-F
A4A3R18				NOT ASSIGNED		
A4A3R19	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A3R20	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A3R21	0698-3429	2		RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A4A3R22	0698-3439	4		RESISTOR 178 1% .125W F TC=0+-100	24546	C4-1/8-T0-178R-F
A4A3R23	0757-0274	5	3	RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1213-F
A4A3R24	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R25*	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A3R26	0698-3151	7		RESISTOR 2.87K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2871-F
A4A3R27	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4A3R28				NOT ASSIGNED		
A4A3R29	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A4A3R30	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A3R31	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A3R32	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A3R33	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R34	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R35*	0757-0180	2	1	RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A3R36	0757-0441	8	2	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A4A3R37	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A4A3R38	0698-3443	0	1	RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A4A3R39	0698-3446	3	1	RESISTOR 383 1% .125W F TC=0+-100	24546	C4-1/8-T0-383R-F
A4A3R40	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A3R41	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A3R42	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R43	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R44	0698-3136	8	4	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A3R45	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A3R46				NOT ASSIGNED		
A4A3R47*	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R48	0698-3444	1	7	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A3R49	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A3R50	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R51	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R52	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A3R53	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A4A3R54*	0757-0399	5	1	RESISTOR 82.5 1% .125W F TC=0+-100	24546	C4-1/8-T0-82R5-F
A4A3R55				NOT ASSIGNED		
A4A3R56				NOT ASSIGNED		
A4A3R57	0757-0442	9	6	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A3R58				NOT ASSIGNED		
A4A3R59	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A3R60	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4A3R61	0698-0082	7	2	RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0-4640-F
A4A3R62	0757-0274	5		RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1213-F
A4A3R63	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A4A3R64	0698-3439	4		RESISTOR 178 1% .125W F TC=0+-100	24546	C4-1/8-T0-178R-F
A4A3R65	0757-0274	5		RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1213-F
A4A3R66*	0757-0462	3	1	RESISTOR 75K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7502-F
A4A3R67	2100-3054	6	1	RESISTOR-TYMR 50K 10% C SIDE=ADJ 17-TYR	02111	43P503
A4A3R68	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0-4640-F
A4A3R69	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A3R70	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A3R71	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A3R72	0757-0280	3	3	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A3R73	0757-0418	9	1	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A4A3R74*	0757-0290	5	1	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4A3R75				NOT ASSIGNED		
A4A3R76	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A3R77	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A3R78	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A3R79*	0698-3450	9	1	RESISTOR 42.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4222-F
A4A3R80*	0757-0278	9	1	RESISTOR 1.78K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1781-F
A4A3R81				FACTORY SELECTED PART-NORMALLY OPEN		
A4A3R82	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R83	2100-3161	6	1	RESISTOR-TRMR 20K 10% C SIDE=ADJ 17-TRN	02111	43P203
A4A3R84	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A3R85	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A3R86				NOT ASSIGNED		
A4A3R87	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A3R88	0698-3160	8	1	RESISTOR 31.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3162-F
A4A3R89	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A3R90	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A4A3R91				NOT ASSIGNED		
A4A3R92	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A3R93	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A3TP1	1251-0600	0	11	CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP9	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP10	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3TP11	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z SQ	28480	1251-0600
A4A3U1	1826-0261	8	1	IC 741 OP AMP T0-99	28480	1826-0261
A4A3VR1	1902-0126	6	1	DIODE-ZNR 2.61V 5% DO-7 PD=.4W TC=-.072%	28480	1902-0126
A4A3VR2	1902-0579	3	1	DIODE-ZNR 5.11V 5% DO-15 PD=.1W TC=-.009%	28480	1902-0579
A4A3VR3	1902-0041	4	1	DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
				A4A3 MISCELLANEOUS PARTS		
	6960-0016	0	1	PLUG-HOLE TR=HD FOR .125-D-HOLE NYL	28480	6960-0016

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A4	85662-60008	8	1	BOARD ASSEMBLY, BANDWIDTH FILTER	28480	85662-60008
A4A4C1	0160-2055	9	48	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C2	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C3	0160-2254	0	1	CAPACITOR-FXD 7.5PF +-25PF 500VDC CER	28480	0160-2254
A4A4C4	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C5	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C6	0160-4297	5	3	CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z922-CDM
A4A4C7	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C8	0160-2257	3	3	CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A4A4C9	0121-0059	7	3	CAPACITOR-V TRMR-CER 2-8PF 350V PC-MTG	52763	304324 2/8PF NPO
A4A4C10*	0160-2249	3	3	CAPACITOR-FXD 4.7PF +-25PF 500VDC CER	28480	0160-2249
A4A4C11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C15	0160-3456	6	2	CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A4A4C16	0160-3431	7	2	CAPACITOR-FXD 6.8PF +-5PF 500VDC CER	28480	0160-3431
A4A4C17*	0140-0194	1	3	CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DM15F111J0300WV1CR
A4A4C18	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C19	0121-0036	0	2	CAPACITOR-V TRMR-CER 5.5-18PF 350V	52763	304324 5.5/18PF NPO
A4A4C20	0121-0446	6	3	CAPACITOR-V TRMR-CER 4.5-20PF 160V	28480	0121-0446
A4A4C21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C22	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C26	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C28	0140-0194	1		CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DM15F111J0300WV1CR
A4A4C29	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C30	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C31	0160-2207	3	3	CAPACITOR-FXD 300PF +-5% 300VDC MICA	28480	0160-2207
A4A4C32	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C33	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z922-CDM
A4A4C34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C35	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C36	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C37	0160-2257	3		CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A4A4C38*	0160-2249	3		CAPACITOR-FXD 4.7PF +-25PF 500VDC CER	28480	0160-2249
A4A4C39	0121-0059	7		CAPACITOR-V TRMR-CER 2-8PF 350V PC-MTG	52763	304324 2/8PF NPO
A4A4C40	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C41	0121-0452	4	2	CAPACITOR-V TRMR-AIR 1.3-5.4PF 250V	74970	187-0103-005
A4A4C42				NOT ASSIGNED		
A4A4C43	0121-0452	4		CAPACITOR-V TRMR-AIR 1.3-5.4PF 250V	74970	187-0103-005
A4A4C44				NOT ASSIGNED		
A4A4C45				NOT ASSIGNED		
A4A4C46	0160-4084	8	3	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A4C47	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C48	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C49	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C50	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C51				NOT ASSIGNED		
A4A4C52	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C53	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C54	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C55	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z922-CDM
A4A4C56	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C57	0160-2207	3		CAPACITOR-FXD 300PF +-5% 300VDC MICA	28480	0160-2207
A4A4C58	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C59	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C60	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C61	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C62	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A4A4C63	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C64	0160-2257	3		CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A4A4C65	0121-0059	7		CAPACITOR-V TRMR-CER 2-8PF 350V PC-MTG	52763	304324 2/8PF NPO
A4A4C66*	0160-2249	3		CAPACITOR-FXD 4.7PF +-25PF 500VDC CER	28480	0160-2249
A4A4C67	0121-0036	0		CAPACITOR-V TRMR-CER 5.5-18PF 350V	52763	304324 5.5/18PF NPO
A4A4C68	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C69	0160-3431	7		CAPACITOR-FXD 6.8PF +-5PF 500VDC CER	28480	0160-3431
A4A4C70*	0140-0194	1		CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DM15F111J0300WV1CR

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A4C71	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C72	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C73	0121-0446	6		CAPACITOR-V TRMR-CER 4.5-20PF 160V	28480	0121-0446
A4A4C74	0121-0446	6		CAPACITOR-V TRMR-CER 4.5-20PF 160V	28480	0121-0446
A4A4C75				NOT ASSIGNED		
A4A4C76	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C77	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C78	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C79	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C80	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C81	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C82				NOT ASSIGNED		
A4A4C83				NOT ASSIGNED		
A4A4C84	0160-2207	3		CAPACITOR-FXD 300PF +-5% 300VDC MICA	28480	0160-2207
A4A4C85				NOT ASSIGNED		
A4A4C86	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4C87	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A4C88	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A4C89	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A4CR1	1901-0047	8	11	DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR2				NOT ASSIGNED		
A4A4CR3	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR4	1901-1070	9	6	DIODE:PIPN	28480	1901-1070
A4A4CR5	1901-1070	9		DIODE:PIPN	28480	1901-1070
A4A4CR6	1901-0535	8	8	DIODE-SCHOTTKY	28480	1901-0535
A4A4CR7	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR8	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A4CR9				NOT ASSIGNED		
A4A4CR10	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR11				NOT ASSIGNED		
A4A4CR12	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR13	1901-1070	9		DIODE:PIPN	28480	1901-1070
A4A4CR14	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A4CR15	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR16	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A4CR17				NOT ASSIGNED		
A4A4CR18	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR19	1901-1070	9		DIODE:PIPN	28480	1901-1070
A4A4CR20	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR21	1901-1070	9		DIODE:PIPN	28480	1901-1070
A4A4CR22	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A4CR23	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR24	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A4CR25	1901-1070	9		DIODE:PIPN	28480	1901-1070
A4A4CR26				NOT ASSIGNED		
A4A4CR27	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A4CR28	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A4CR29	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4CR30	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A4E1	9170-0029	3	15	CORE-SHIELDING BEAD	28480	9170-0029
A4A4E2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E3	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E4	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E5	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E6	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E7	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E8	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E9	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E10	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E11	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E12	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E13	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E14	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4E15	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A4L1	9100-1641	0	3	COIL-MLD 240UH 5% Q#65 .155DX.375LG-NOM	28480	9100-1641
A4A4L2	9140-0114	4	4	COIL-MLD 10UH 10% Q#55 .155DX.375LG-NOM	28480	9140-0114
A4A4L3	9100-1620	5	4	COIL-MLD 15UH 10% Q#65 .155DX.375LG-NOM	28480	9100-1620
A4A4L4	9100-3854	1	2	COIL 400NH 5% Q#150 .30X1.016LG-NOM	28480	9100-3854
A4A4L5	9140-0098	3	3	COIL-MLD 2.2UH 10% Q#33 .155DX.375LG-NOM	28480	9140-0098
A4A4L6	9100-1620	5		COIL-MLD 15UH 10% Q#65 .155DX.375LG-NOM	28480	9100-1620
A4A4L7	9100-1641	0		COIL-MLD 240UH 5% Q#65 .155DX.375LG-NOM	28480	9100-1641
A4A4L8	9140-0098	3		COIL-MLD 2.2UH 10% Q#33 .155DX.375LG-NOM	28480	9140-0098
A4A4L9	9100-1618	1	7	COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A4L10	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A4L11				NOT ASSIGNED		
A4A4L12	9100-1618	1		COIL-MLD 5.6UM 10X Q=45 .155DX.375LG-NOM	28480	9100-1618
A4A4L13	9100-1620	5		COIL-MLD 15UM 10X Q=65 .155DX.375LG-NOM	28480	9100-1620
A4A4L14	9100-1618	1		COIL-MLD 5.6UM 10X Q=45 .155DX.375LG-NOM	28480	9100-1618
A4A4L15	9140-0114	4		COIL-MLD 10UM 10X Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A4L16	9140-0114	4		COIL-MLD 10UM 10X Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A4L17	9140-0114	4		COIL-MLD 10UM 10X Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A4L18	9100-3854	1		COIL 400NM 5X Q=150 .30X1.016LG-NOM	28480	9100-3854
A4A4L19	9140-0098	3		COIL-MLD 2.2UM 10X Q=33 .155DX.375LG-NOM	28480	9140-0098
A4A4L20	9100-1641	0		COIL-MLD 240UM 5X Q=65 .155DX.375LG-NOM	28480	9100-1641
A4A4L21				NOT ASSIGNED		
A4A4L22	9100-1620	5		COIL-MLD 15UM 10X Q=65 .155DX.375LG-NOM	28480	9100-1620
A4A4L23				NOT ASSIGNED		
A4A4L24	9100-1618	1		COIL-MLD 5.6UM 10X Q=45 .155DX.375LG-NOM	28480	9100-1618
A4A4L25	9100-1618	1		COIL-MLD 5.6UM 10X Q=45 .155DX.375LG-NOM	28480	9100-1618
A4A4L26	9100-1618	1		COIL-MLD 5.6UM 10X Q=45 .155DX.375LG-NOM	28480	9100-1618
A4A4Q1	1855-0267	5	3	TRANSISTOR J-FET N-CHAN D-MODE TO-92 SI	28480	1855-0267
A4A4Q2	1853-0007	7	7	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A4Q3	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A4Q4	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A4Q5	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A4Q6	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A4Q7	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A4Q8	1854-0404	0	3	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A4Q9	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A4Q10	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A4Q11	1855-0267	5		TRANSISTOR J-FET N-CHAN D-MODE TO-92 SI	28480	1855-0267
A4A4Q12	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A4Q13	1855-0267	5		TRANSISTOR J-FET N-CHAN D-MODE TO-92 SI	28480	1855-0267
A4A4Q14	1854-0345	8	1	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4A4R1	0757-0441	8		RESISTOR 8.25K 1X .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A4A4R2	0698-3431	6	2	RESISTOR 23.7 1X .125W F TC=0+-100	03888	PME55-1/8-T0-237R-F
A4A4R3*	0698-8819	4	1	RESISTOR 3.83 1X .125W F TC=0+-100	24546	0698-8819
A4A4R4	0757-0401	0		RESISTOR 100 1X .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A4R5	0757-0442	9	4	RESISTOR 10K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A4R6	0757-0397	3	1	RESISTOR 68.1 1X .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A4A4R7	0698-3155	1	3	RESISTOR 4.64K 1X .125W F TC=0+-100	24546	C4-1/8-T0-4641-F
A4A4R8	0757-0280	3	8	RESISTOR 1K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A4R9	0757-0438	3	6	RESISTOR 5.11K 1X .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A4A4R10	0698-3441	8	3	RESISTOR 215 1X .125W F TC=0+-100	24546	C4-1/8-T0-215R-F
A4A4R11	0757-0443	0	3	RESISTOR 11K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1102-F
A4A4R12	0698-0082	7	4	RESISTOR 464 1X .125W F TC=0+-100	24546	C4-1/8-T0-4640-F
A4A4R13	0698-3444	1	3	RESISTOR 316 1X .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A4R14	0698-3442	9	3	RESISTOR 237 1X .125W F TC=0+-100	24546	C4-1/8-T0-237R-F
A4A4R15	0757-0279	0	3	RESISTOR 3.16K 1X .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A4R16*	0757-0200	1	1	RESISTOR 5.62K 1X .125W F TC=0+-100	19701	MF4C1/8-T0-5261-F
A4A4R17	0698-3156	2	4	RESISTOR 14.7K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1472-F
A4A4R18	0698-3156	2		RESISTOR 14.7K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1472-F
A4A4R19	0757-0280	3		RESISTOR 1K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A4R20*	0757-0288	1	3	RESISTOR 9.09K 1X .125W F TC=0+-100	24546	C4-1/8-T0-9091-F
A4A4R21	0757-0290	5	7	RESISTOR 6.19K 1X .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4A4R22	0757-0290	5		RESISTOR 6.19K 1X .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4A4R23				NOT ASSIGNED		
A4A4R24	0698-3431	6		RESISTOR 23.7 1X .125W F TC=0+-100	03888	PME55-1/8-T0-237R-F
A4A4R25	0757-0401	0		RESISTOR 100 1X .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A4R26	0757-0280	3		RESISTOR 1K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A4R27	0698-3155	1		RESISTOR 4.64K 1X .125W F TC=0+-100	24546	C4-1/8-T0-4641-F
A4A4R28	0698-0082	7		RESISTOR 464 1X .125W F TC=0+-100	24546	C4-1/8-T0-4640-F
A4A4R29	0757-0443	0		RESISTOR 11K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1102-F
A4A4R30	0757-0438	3		RESISTOR 5.11K 1X .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A4A4R31	0698-3441	8		RESISTOR 215 1X .125W F TC=0+-100	24546	C4-1/8-T0-215R-F
A4A4R32	0698-3444	1		RESISTOR 316 1X .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A4R33	0698-3442	9		RESISTOR 237 1X .125W F TC=0+-100	24546	C4-1/8-T0-237R-F
A4A4R34	0757-0279	0		RESISTOR 3.16K 1X .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4A4R35*	0757-0401	0	5	RESISTOR 100 1X .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A4R36				NOT ASSIGNED		
A4A4R37	0757-0458	7	1	RESISTOR 51.1K 1X .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A4A4R38				NOT ASSIGNED		
A4A4R39	0757-0280	3		RESISTOR 1K 1X .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A4R40*	0757-0288	1		RESISTOR 9.09K 1X .125W F TC=0+-100	24546	C4-1/8-T0-9091-F
A4A4R41	0757-0290	5		RESISTOR 6.19K 1X .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4A4R42*				*FACTORY SELECTED PART-NORMALLY OPEN		
A4A4R43	2100-3165	0	1	RESISTOR-TRMR 2M 20X C SIDE-ADJ 17-TRN	02111	43P205
A4A4R44*				*FACTORY SELECTED PART-NORMALLY OPEN		
A4A4R45*	0757-0346	2	1	RESISTOR 10 1X .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A4R46	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A4R47				NOT ASSIGNED		
A4A4R48	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A4A4R49	2100-3052	4		RESISTOR-TRMR 50 20% C SIDE-ADJ 17-TRN	02111	43P500
A4A4R50	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A4R51	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A4R52	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4641-F
A4A4R53	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0=4640-F
A4A4R54	0757-0443	0		RESISTOR 11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1102-F
A4A4R55	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A4A4R56	0698-3441	8		RESISTOR 215 1% .125W F TC=0+-100	24546	C4-1/8-T0=215R-F
A4A4R57	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0=316R-F
A4A4R58	0698-3442	0		RESISTOR 237 1% .125W F TC=0+-100	24546	C4-1/8-T0=237R-F
A4A4R59	0757-0279	9		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A4R60	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A4A4R61	0698-3156	2	1	RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1472-F
A4A4R62	0698-3156	2		RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1472-F
A4A4R63	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A4R64	0757-0288	1		RESISTOR 9.09K 1% .125W F TC=0+-100	24546	C4-1/8-T0=9091-F
A4A4R65	0757-1094	9		RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1471-F
A4A4R66	0757-0290	5	1	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A4A4R67	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A4A4R68	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A4R69				NOT ASSIGNED		
A4A4R70	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A4A4R71			1	NOT ASSIGNED		
A4A4R72	0698-3438	3		RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0=147R-F
A4A4R73	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0=4640-F
A4A4R74	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A4A4R75	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A4A4R76	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A4A4R77				NOT ASSIGNED		
A4A4R81	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A4R82	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A4R83				NOT ASSIGNED		
A4A4R84	0757-0442	9	3	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A4R85	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A4R86				NOT ASSIGNED		
A4A4R87				NOT ASSIGNED		
A4A4R88	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A4A4R89	0698-3154	0	3	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A4A4R90	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A4A4R91	0757-0180	2		RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A4R92	0757-0180	2		RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A4R93	0757-0180	2		RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A4R94	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1003-F
A4A4TP1	0360-1788	7	2	CONNECTOR-SGL CONT PIN .045-IN-B3C-8Z SQ	28480	0360-1788
A4A4TP2	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-B3C-8Z SQ	28480	0360-1788
A4A4TP3	0360-1514	7		TERMINAL-STUD SGL-PIN PRESS-MTG	28480	0360-1514
A4A4TP4	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-B3C-8Z SQ	28480	0360-1788
A4A4TP5	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-B3C-8Z SQ	28480	0360-1788
A4A4TP6	0360-1788	7	7	CONNECTOR-SGL CONT PIN .045-IN-B3C-8Z SQ	28480	0360-1788
A4A4TP7	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-B3C-8Z SQ	28480	0360-1788
A4A4TP8	0360-1514	7		TERMINAL-STUD SGL-PIN PRESS-MTG	28480	0360-1514
A4A4VR1	1902-0048	1	1	DIODE-ZNR 6.81V 5X DO-7 PDS-4W TC=+.043X	28480	1902-0048
A4A4Y1-Y3	0410-1029	6	3	CRYSTAL, 21.4 MHZ (SET OF SIX) (INCLUDES A4A8Y1-2, A4A6A1Y1) A4A4 MISCELLANEOUS PARTS	28480	0410-1029
	6960-0016	0	1	PLUG-HOLE TR=HD FOR .125=D-HOLE NYL	28480	6960-0016

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A5	85662-60007	7	1	BOARD ASSEMBLY, STEP GAIN	28480	85662-60007
A4ASC1	0160-4297	5	3	CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z322-CDH
A4ASC2				NOT ASSIGNED		
A4ASC3	0160-2055	9	41	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC4	0180-0197	8	1	CAPACITOR-FXD 2.2UF +10% 20VDC TA	56289	150D225X9020A2
A4ASC5	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC6				NOT ASSIGNED		
A4ASC7				FACTORY SELECTED PART, NORMALLY OPEN		
A4ASC8	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC9	0160-4633	3	1	CAPACITOR-FXD 12PF +-5% 500VDC CER	28480	0160-4633
A4ASC10	0121-0451	3	1	CAPACITOR-V TRMR-AIR 1.7-11PF 250V	74970	187-0106-005
A4ASC11	0160-0127	2	1	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A4ASC12				NOT ASSIGNED		
A4ASC13	0140-0193	0	1	CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300WV1CR
A4ASC14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC15	0140-0200	0	1	CAPACITOR-FXD 390PF +-5% 300VDC MICA	72136	DM15F391J0300WV1CR
A4ASC16				NOT ASSIGNED		
A4ASC17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC18	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC19	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC22	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC24	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z322-CDH
A4ASC25	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223Z322-CDH
A4ASC26	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC29	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC30				NOT ASSIGNED		
A4ASC31	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC32	0160-2250	6	1	CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4ASC33	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC35	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC36	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC37	0160-2244	8	2	CAPACITOR-FXD 3PF +-25PF 500VDC CER	28480	0160-2244
A4ASC38	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC39	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC40	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC41	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC42	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC43				NOT ASSIGNED		
A4ASC44	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC45	0160-2244	8		CAPACITOR-FXD 3PF +-25PF 500VDC CER	28480	0160-2244
A4ASC46	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC47	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC48	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC49	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC50	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC51	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC52	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC53	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC54	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC55	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC56	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC57	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC58	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC59	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC60				NOT ASSIGNED		
A4ASC61				NOT ASSIGNED		
A4ASC62				NOT ASSIGNED		
A4ASC63	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4ASC64	0180-2216	6	1	CAPACITOR-FXD 350UF+75-10% 16VDC AL	56289	30D357G016DM2
A4ASCR1	0122-0255	7	1	DIODE-VVC 1N5144 22PF 10% C4/C60-MIN=3,2	04713	1N5144
A4ASCR2	1901-0040	1	8	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4ASCR3	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4ASCR4	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4ASCR5	1901-1070	9	4	DIODE;PIN	28480	1901-1070
A4ASCR6	1901-1070	9		DIODE;PIN	28480	1901-1070
A4ASCR7	1901-1070	9		DIODE;PIN	28480	1901-1070
A4ASCR8	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4ASCR9	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4ASCR10	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4ASCR11	1901-1070	9		DIODE PIN	28480	1901-1070
A4ASCR12	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4ASCR13	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4ASE1	9170-0029	3	13	CORE-SHIELDING BEAD	28480	9170-0029
A4ASE2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE3	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE4	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE5	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE6	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE7	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE8	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE9	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE10	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE11	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE12	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASE13	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ASL1	9140-0096	1	1	COIL-MLD 1UH 10% Q#50 .155DX,375LG-NOM	28480	9140-0096
A4ASL2				NOT ASSIGNED		
A4ASL3	9100-1618	1	3	COIL-MLD 5.6UH 10% Q#45 .155DX,375LG-NOM	28480	9100-1618
A4ASL4	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX,375LG-NOM	28480	9100-1618
A4ASL5	9100-1624	9	6	COIL-MLD 30UH 5% Q#65 .155DX,375LG-NOM	28480	9100-1624
A4ASL6	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX,375LG-NOM	28480	9100-1618
A4ASL7				NOT ASSIGNED		
A4ASL8				NOT ASSIGNED		
A4ASL9				NOT ASSIGNED		
A4ASL10	9100-1624	9		COIL-MLD 30UH 5% Q#65 .155DX,375LG-NOM	28480	9100-1624
A4ASL11	9100-1624	9		COIL-MLD 30UH 5% Q#65 .155DX,375LG-NOM	28480	9100-1624
A4ASL12	9100-1624	9		COIL-MLD 30UH 5% Q#65 .155DX,375LG-NOM	28480	9100-1624
A4ASL13	9100-1624	9		COIL-MLD 30UH 5% Q#65 .155DX,375LG-NOM	28480	9100-1624
A4ASL14	9100-1624	9		COIL-MLD 30UH 5% Q#65 .155DX,375LG-NOM	28480	9100-1624
A4ASQ1	1854-0345	8	3	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4ASQ2	1853-0015	7	3	TRANSISTOR PNP SI PD=200MW FT=500MHZ	28480	1853-0015
A4ASQ3	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4ASQ4	1853-0015	7		TRANSISTOR PNP SI PD=200MW FT=500MHZ	28480	1853-0015
A4ASQ5	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4ASQ6	1853-0015	7		TRANSISTOR PNP SI PD=200MW FT=500MHZ	28480	1853-0015
A4ASQ7	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4ASQ8	1854-0019	3	9	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ9	1853-0281	9	1	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4ASQ10	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ11	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ12	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ13	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ14	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ15	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ16	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASQ17	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4ASR1	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4ASR2	2100-3103	6	1	RESISTOR-TRMR 10K 10% C SIDE=ADJ 17-TRN	02111	43P103
A4ASR3	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A4ASR4	0757-0458	7	1	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A4ASR5	0757-0288	1	1	RESISTOR 9.09K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-9091-F
A4ASR6	0757-0442	9	9	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4ASR7	0757-0465	6	3	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A4ASR8	0698-3156	2	1	RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1472-F
A4ASR9	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3831-F
A4ASR10*	0698-3153	9	2	RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3831-F
A4ASR11	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1471-F
A4ASR12	0698-3260	9	8	RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4ASR13	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4ASR14	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4ASR15	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4ASR16	0757-0403	2	2	RESISTOR 121 1% .125W F TC=0+-100	24546	C4-1/8-T0-121R-F
A4ASR17	0757-0346	2	3	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4ASR18	0698-3444	1	5	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4ASR19	0757-0399	5	2	RESISTOR 82.5 1% .125W F TC=0+-100	24546	C4-1/8-T0-82R5-F
A4ASR20	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4ASR21	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4ASR22	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4ASR23	0757-0399	5		RESISTOR 82.5 1% .125W F TC=0+-100	24546	C4-1/8-T0-82R5-F
A4ASR24	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4ASR25	0757-0279	0	2	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4ASR26	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A4ASR27	0757-0290	5	3	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4ASR28	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4ASR29	0757-0276	7	3	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-6192-F
A4ASR30	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A5R31	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R32	2100-3056	8	3	RESISTOR-TRMR 5K 10% C SIDE=ADJ 17-TRN	02111	43P502
A4A5R33	2100-3163	8	1	RESISTOR-TRMP 1M 20% C SIDE=ADJ 17-TRN	02111	43P105
A4A5R34	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A4A5R35	0698-3132	4	1	RESISTOR 261 1% .125W F TC=0+-100	24546	C4-1/8-T0-2610-F
A4A5R36	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R37	0757-0276	7		RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-6192-F
A4A5R38	0757-0401	0	2	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A5R39	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4A5R40	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A5R41	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A5R42	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A5R43	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R44	2100-3056	8		RESISTOR-TRMR 5K 10% C SIDE=ADJ 17-TRN	02111	43P502
A4A5R45	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R46	0757-0420	3	2	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A4A5R47	0757-0276	7		RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-6192-F
A4A5R48	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A5R49	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A4A5R50	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A4A5R51	2100-3161	8	1	RESISTOR-TRMR 20K 10% C SIDE=ADJ 17-TRN	02111	43P203
A4A5R52	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A5R53	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R54	2100-3056	8		RESISTOR-TRMR 5K 10% C SIDE=ADJ 17-TRN	02111	43P502
A4A5R55	0757-0420	3		RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A4A5R56	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R57	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A4A5R58	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A5R59	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4A5R60	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A5R61	0757-0403	2		RESISTOR 121 1% .125W F TC=0+-100	24546	C4-1/8-T0-121R-F
A4A5R62	0698-0084	9	7	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4A5R63	0757-0397	3	1	RESISTOR 68.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A4A5R64	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R65	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A5R66	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A5R67	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4A5R68	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A5R69	0757-0395	1	1	RESISTOR 56.2 1% .125W F TC=0+-100	24546	C4-1/8-T0-56R2-F
A4A5R70	0757-0280	3	11	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R71	0757-0400	9	1	RESISTOR 90.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-90R9-F
A4A5R72				NOT ASSIGNED		
A4A5R79	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R80	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A5R81				NOT ASSIGNED		
A4A5R82	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A5R83	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A4A5R84	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A5R85	0757-0316	6	1	RESISTOR 42.2 1% .125W F TC=0+-100	24546	C4-1/8-T0-42R2-F
A4A5R86	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A4A5R87	0698-3438	3	1	RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0-147R-F
A4A5R88	0757-0317	7	1	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1331-F
A4A5R89	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R90	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A5R91	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A5R92	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A4A5R93	0757-0180	2	1	RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A5R94				NOT ASSIGNED		
A4A5R95				NOT ASSIGNED		
A4A5R96	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A5R97	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A5TP1	1251-0600	0	3	CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 8Q	28480	1251-0600
A4A5TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 8Q	28480	1251-0600
A4A5TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 8Q	28480	1251-0600
A4A5U1	1826-0261	8	1	IC 741 OP AMP T0-99	28480	1826-0261
A4A5VR1	1902-3104	6	1	DIODE-ZNR 5.62V 5% DO-7 PDM,4W TC=+.016X	28480	1902-3104
A4A5Y1	0410-0671	2	1	CRYSTAL, 1.4 MHZ A4A5 MISCELLANEOUS PARTS	28480	0410-0671
	86701-40001	9	1	EXTRACTOR, PC BOARD	28480	86701-40001
	6960-0019	3	1	PLUG-MOLE DOME-HD FOR .188-D-HOLE BR8	28480	6960-0019

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A6	85662-60018	0	1	DOWN/UP CONVERTER ASSEMBLY (INCLUDES A4A6A1 UP CONVERTER & A4A6A2 DOWN CONVERTER)	28480	85662-60018
A4A6J1	1250-0690	6	2	CONNECTOR=RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
A4A6J2	1250-0690	6		CONNECTOR=RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
				A4A6 MISCELLANEOUS PARTS		
	86701-40001	9	1	EXTRACTOR, PC BOARD	28480	86701-40001
A4A6A1				BOARD ASSEMBLY, UP-CONVERTER (P/O A4A6)		
A4A6A1C1				NOT ASSIGNED		
A4A6A1C2	0160-2055	9	18	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C3				NOT ASSIGNED		
A4A6A1C4	0160-4084	8	2	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A6A1C5	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C6	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C7				NOT ASSIGNED		
A4A6A1C8				NOT ASSIGNED		
A4A6A1C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A6A1C10				NOT ASSIGNED		
A4A6A1C11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C14				NOT ASSIGNED		
A4A6A1C15				NOT ASSIGNED		
A4A6A1C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C18	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C19	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C22	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C26	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C27	0160-2244	8	1	CAPACITOR-FXD 3PF +-25PF 500VDC CER	28480	0160-2244
A4A6A1C28				NOT ASSIGNED		
A4A6A1C29				NOT ASSIGNED		
A4A6A1C30	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A1C31	0121-0453	5	1	CAPACITOR-V TRMR-AIR 1,3-5,4PF 250V	74970	187-0103-195
A4A6A1C32	0140-0199	6	1	CAPACITOR-FXD 240PF +-5% 300VDC MICA	72136	DM15F241J0300HV1CR
A4A6A1CR1				NOT ASSIGNED		
A4A6A1CR2	1901-0047	8	3	DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A6A1CR3	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A6A1CR4	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A6A1E1	9170-0029	3	7	CORE-SHIELDING BEAD	28480	9170-0029
A4A6A1E2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A1E3	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A1E4	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A1E5	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A1E6	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A1E7	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A1L1	9140-0112	2	2	COIL-MLD 4,7UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0112
A4A6A1L2	9100-1611	4	1	COIL-MLD 220NH 20% Q=50 .155DX,375LG-NOM	28480	9100-1611
A4A6A1L3				NOT ASSIGNED		
A4A6A1L4	9100-1624	9	1	COIL-MLD 30UH 5% Q=65 .155DX,375LG-NOM	28480	9100-1624
A4A6A1L5	9100-1620	5	1	COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A4A6A1L6				NOT ASSIGNED		
A4A6A1L7	9140-0112	2		COIL-MLD 4,7UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0112
A4A6A1L8	9100-1618	1	1	COIL-MLD 5,6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4A6A1Q1	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A1Q2	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A6A1Q3	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4A6A1Q4	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A1Q5	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A4A6A1Q6	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A6A1Q7	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A1Q8	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A1Q9	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A6A1R1	0757-0401	0	2	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A6A1R2				NOT ASSIGNED		
A4A6A1R3				NOT ASSIGNED		
A4A6A1R4	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1471-F
A4A6A1R5	0757-0465	6	2	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1003-F
A4A6A1R6	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A4A6A1R7				NOT ASSIGNED		
A4A6A1R8				NOT ASSIGNED		
A4A6A1R9	0698-3442	9	1	RESISTOR 237 1% .125W F TC=0+-100	24546	C4-1/8-T0=237R-F
A4A6A1R10	0757-0400	9	1	RESISTOR 90.9 1% .125W F TC=0+-100	24546	C4-1/8-T0=90R9-F
A4A6A1R11				NOT ASSIGNED		
A4A6A1R12	0757-0279	0	2	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A6A1R13	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A6A1R14	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1003-F
A4A6A1R15	0757-0280	3	4	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A6A1R16	0757-0317	7	1	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1331-F
A4A6A1R17	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A1R18	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A1R19	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A6A1R20	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A6A1R21	0757-0180	2	2	RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A6A1R22	0757-0180	2		RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A6A1R23	0757-0346	2	2	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A4A6A1R24	0757-0416	7	2	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A4A6A1R25	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A6A1R26	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0=51R1-F
A4A6A1R27	0757-0439	4	1	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0=6811-F
A4A6A1R28	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A1R29	2100-3154	7	1	RESISTOR-TRMR 1K 10% C SIDE-ADJ 17-TRN	02111	43P102
A4A6A1R30	0698-3439	4	1	RESISTOR 178 1% .125W F TC=0+-100	24546	C4-1/8-T0=178R-F
A4A6A1R31				NOT ASSIGNED		
A4A6A1R32	0757-0419	0	1	RESISTOR 681 1% .125W F TC=0+-100	24546	C4-1/8-T0=681R-F
A4A6A1R33	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A4A6A1R34	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A1R35	0698-3444	1	1	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0=316R-F
A4A6A1R36-						
A4A6A1R49				NOT ASSIGNED		
A4A6A1R50	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A1R51	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1622-F
A4A6A1R52-						
A4A6A1R59				NOT ASSIGNED		
A4A6A1R60	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A4A6A1R61	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A6A1T1	85662-80002	4	1	COIL ASSEMBLY, TRANSFORMER	28480	85662-80002
A4A6A1TP1				NOT ASSIGNED		
A4A6A1TP2	1251-0600	0	2	CONNECTOR-SGL CONT PIN 1,14-MM-B3C-8Z 30	28480	1251-0600
A4A6A1TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B3C-8Z 30	28480	1251-0600
A4A6A1U1	0955-0084	5	1	MIXER, DOUBLE-BALANCED, 200MH	28480	0955-0084
A4A6A1Y1	0410-1029	6	1	CRYSTAL, 21.4 MHZ (SET OF SIX) (INCLUDES A4A6Y1-Y2, A4A6Y1-Y3)	28480	0410-1029
	6960-0016	0	1	A4A6A1 MISCELLANEOUS PARTS PLUG-HOLE TR-MD FOR .125-D-MOLE NYL	28480	6960-0016

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A6A2				BOARD ASSEMBLY, UP-CONVERTER (P/O A4A6)		
A4A6A2C1				NOT ASSIGNED		
A4A6A2C2	0160-2055	9	18	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C3				NOT ASSIGNED		
A4A6A2C4	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C5				NOT ASSIGNED		
A4A6A2C6				NOT ASSIGNED		
A4A6A2C7	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C8	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C9	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C14	0140-0196	3	1	CAPACITOR-FXD 150PF +-5% 300VDC MICA	72136	DM15F151J0300HV1CR
A4A6A2C15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C18	0160-4084	8	2	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A6A2C19	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A6A2C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C21	0160-2207	3	1	CAPACITOR-FXD 300PF +-5% 300VDC MICA	28480	0160-2207
A4A6A2C22	0140-0193	0	1	CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300HV1CR
A4A6A2C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C25				NOT ASSIGNED		
A4A6A2C26				NOT ASSIGNED		
A4A6A2C27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C28				NOT ASSIGNED		
A4A6A2C28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C29	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A6A2C30	0140-0210	2	1	CAPACITOR-FXD 270PF +-5% 300VDC MICA	72136	DM15F271J0300HV1CR
A4A6A2CR1	1901-0040	1	1	DIODE-SWITCHING 30V 50MA 2N8 D0=35	28480	1901-0040
A4A6A2CR2				NOT ASSIGNED		
A4A6A2CR3	1901-0047	8	2	DIODE-SWITCHING 20V 75MA 10N8	28480	1901-0047
A4A6A2CR4				NOT ASSIGNED		
A4A6A2CR5	1901-0047	8		DIODE-SWITCHING 20V 75MA 10N8	28480	1901-0047
A4A6A2E1	9170-0029	3	4	CORE-SHIELDING BEAD	28480	9170-0029
A4A6A2E2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A2E3	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A2E4	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4A6A2L1	9140-0111	1	1	COIL-MLD 3.3UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0111
A4A6A2L2				NOT ASSIGNED		
A4A6A2L3				NOT ASSIGNED		
A4A6A2L4	9140-0112	2	3	COIL-MLD 4.7UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0112
A4A6A2L5	9100-1625	0	1	COIL-MLD 33UH 5% Q=65 .155DX,375LG-NOM	28480	9100-1625
A4A6A2L6				NOT ASSIGNED		
A4A6A2L7				NOT ASSIGNED		
A4A6A2L8	9140-0112	2		COIL-MLD 4.7UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0112
A4A6A2L9	9140-0112	2		COIL-MLD 4.7UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0112
A4A6A2L10	9140-0114	4	1	COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A4A6A2L11	9100-1611	4	1	COIL-MLD 220NH 20% Q=50 .155DX,375LG-NOM	28480	9100-1611
A4A6A2L12	9100-2232	7	1	COIL-MLD 560NH 10% Q=50 .156DX,375LG-NOM	28480	9100-2232
A4A6A2Q1	1854-0019	3	4	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A2Q2	1853-0034	0	2	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A6A2Q3	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A2Q4	1854-0345	8	1	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4A6A2Q5	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A2Q6	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A4A6A2Q7	1853-0007	7	1	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4A6A2Q8	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A6A2R1-				NOT ASSIGNED		
A4A6A2R3				NOT ASSIGNED		
A4A6A2R4	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A4A6A2R5-				NOT ASSIGNED		
A4A6A2R10				NOT ASSIGNED		
A4A6A2R11	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A4A6A2R12	0757-0279	0	5	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3161-F
A4A6A2R13	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3161-F
A4A6A2R14	0757-0394	0	4	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A4A6A2R15	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A6A2R16	0757-0442	9	4	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A2R17	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0=51R1-F
A4A6A2R18	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A2R19	0757-0418	9	2	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0=619R-F
A4A6A2R20	0698-0084	9	2	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2151-F
A4A6A2R21				NOT ASSIGNED		
A4A6A2R22	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A2R23	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A6A2R24	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A4A6A2R25	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2151-F
A4A6A2R26	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0=51R1-F
A4A6A2R27	0698-0082	7	2	RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0=4640-F
A4A6A2R28	0757-0180	2	1	RESISTOR 31.6 1% .125W F TC=0+-100	28480	0757-0180
A4A6A2R29	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0=4640-F
A4A6A2R30	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A6A2R31	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A4A6A2R32	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0=422R-F
A4A6A2R33*	0757-0395	1	1	RESISTOR 56.2 1% .125W F TC=0+-100	24546	C4-1/8-T0=56R2-F
A4A6A2R34				NOT ASSIGNED		
A4A6A2R35	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A4A6A2R36				NOT ASSIGNED		
A4A6A2R37				NOT ASSIGNED		
A4A6A2R38	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A4A6A2R39	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3161-F
A4A6A2R40	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A4A6A2R41	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0=51R1-F
A4A6A2R42	0757-0418	9		RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0=619R-F
A4A6A2R43-				NOT ASSIGNED		
A4A6A2R49				NOT ASSIGNED		
A4A6A2R50	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A4A6A2R51				NOT ASSIGNED		
A4A6A2R52	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A4A6A2T1	85662-80001	3	1	COIL ASSEMBLY, TRANSFORMER	28480	85662-80001
A4A6A2U1	0955-0084	5	1	MIXER, DOUBLE-BALANCED, 200MW	28480	0955-0084
A4A6A2VR1	1902-0049	2	1	DIODE-ZNR 6.19V 5% DO-7 PD=.4W TC=+.022%	28480	1902-0049
A4A6A2Y1				A4A6A2 MISCELLANEOUS PARTS		
	6960-0016	0	1	PLUG-HOLE TR=HD FOR .125=D-HOLE NYL	28480	6960-0016

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A7	85662-60004	4	1	BOARD ASSEMBLY, 3 MHZ BANDWIDTH FILTER	28480	85662-60004
A4A7C1	0160-2055	9	37	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C2	0160-2261	9	1	CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A4A7C3	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C4	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C5*	0160-4611	7	5	CAPACITOR-FXD 68PF +-1% 300VDC MICA	28480	0160-4611
A4A7C6	0121-0446	6	5	CAPACITOR-V TRMR-CER 4.5-20 160V PC-MTG	28480	0121-0446
A4A7C7	0121-0105	4	5	CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304324 9/35PF N650
A4A7C8	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C9	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C11	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C12*	0160-4611	7		CAPACITOR-FXD 68PF +-1% 300VDC MICA	28480	0160-4611
A4A7C13	0121-0493	3	4	CAPACITOR-V AIR DIEI 1.7-11PF 250V	74970	187-0306-105
A4A7C14	0121-0446	6		CAPACITOR-V TRMR-CER 4.5-20 160V PC-MTG	28480	0121-0446
A4A7C15	0121-0105	4		CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304324 9/35PF N650
A4A7C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C18	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C19	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C21*	0160-4611	7		CAPACITOR-FXD 68PF +-1% 300VDC MICA	28480	0160-4611
A4A7C22	0121-0493	3		CAPACITOR-V AIR DIEI 1.7-11PF 250V	74970	187-0306-105
A4A7C23	0121-0446	6		CAPACITOR-V TRMR-CER 4.5-20 160V PC-MTG	28480	0121-0446
A4A7C24	0121-0105	4		CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304324 9/35PF N650
A4A7C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C26	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C27	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C29	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C30*	0160-4611	7		CAPACITOR-FXD 68PF +-1% 300VDC MICA	28480	0160-4611
A4A7C31	0121-0493	3		CAPACITOR-V AIR DIEI 1.7-11PF 250V	74970	187-0306-105
A4A7C32	0121-0446	6		CAPACITOR-V TRMR-CER 4.5-20PF 160V PC-MTG	28480	0121-0446
A4A7C33	0121-0105	4		CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304324 9/35PF N650
A4A7C34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C35	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C36	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C37	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C38	0160-2250	6		CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7C39*	0160-4611	7		CAPACITOR-FXD 68PF +-1% 300VDC MICA	28480	0160-4611
A4A7C40	0121-0493	3		CAPACITOR-V AIR DIEI 1.7-11PF 250V	74970	187-0306-105
A4A7C41	0121-0446	6		CAPACITOR-V TRMR-CER 4.5-20PF 160V PC-MTG	28480	0121-0446
A4A7C42	0121-0105	4		CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304324 9/35PF N650
A4A7C43	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C44	0160-2244	8	2	CAPACITOR-FXD 3PF +-25PF 500VDC CER	28480	0160-2244
A4A7C45	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C46	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C47	0160-2244	8		CAPACITOR-FXD 3PF +-25PF 500VDC CER	28480	0160-2244
A4A7C48	0160-4300	1	14	CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDM
A4A7C49	0180-0197	8	6	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A4A7C50	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A4A7C51	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A4A7C52	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A4A7C53	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A4A7C54	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A4A7C55	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C56	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C57	0160-4300	1	5	CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDM
A4A7C58	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232822-CDM
A4A7C59	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C60	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C61	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C62	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C63	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDM
A4A7C64	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232822-CDM
A4A7C65	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C66	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C67	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C68	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C69	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDM
A4A7C70	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232822-CDM

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A7C71	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C72	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C73	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C74	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C75	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C76	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232822-CDH
A4A7C77	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C78	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C79	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C80	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C81	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C82	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M2232822-CDH
A4A7C83	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C84	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A7C85	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C86	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C87	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C88	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C89	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C90	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C91	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C92	0160-4300	1		CAPACITOR-FXD .047UF +80-20% 100VDC CER	56289	C023F101L4732822-CDH
A4A7C93*	0160-2250	6	9	CAPACITOR-FXD 5.1PF +-25PF 500VDC CER	28480	0160-2250
A4A7CR1- A4A7CR30	1901-0040	1	30	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A7E1- A4A7E17	9170-0029	3	17	CORE-SHIELDING BEAD	28480	9170-0029
A4A7L1	9100-1643	2	6	COIL-MLD 300UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1643
A4A7L2	9100-1648	7	5	COIL-MLD 560UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1648
A4A7L3	9100-1629	4	5	COIL-MLD 47UH 5% Q=55 .155DX.375LG-NOM	28480	9100-1629
A4A7L4	9100-1643	2		COIL-MLD 300UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1643
A4A7L5	9100-1648	7		COIL-MLD 560UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1648
A4A7L6	9100-1629	4		COIL-MLD 47UH 5% Q=55 .155DX.375LG-NOM	28480	9100-1629
A4A7L7	9100-1643	2		COIL-MLD 300UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1643
A4A7L8	9100-1648	7		COIL-MLD 560UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1648
A4A7L9	9100-1629	4		COIL-MLD 47UH 5% Q=55 .155DX.375LG-NOM	28480	9100-1629
A4A7L10	9100-1643	2		COIL-MLD 300UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1643
A4A7L11	9100-1648	7		COIL-MLD 560UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1648
A4A7L12	9100-1629	4		COIL-MLD 47UH 5% Q=55 .155DX.375LG-NOM	28480	9100-1629
A4A7L13	9100-1643	2		COIL-MLD 300UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1643
A4A7L14	9100-1648	7		COIL-MLD 560UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1648
A4A7L15	9100-1629	4		COIL-MLD 47UH 5% Q=55 .155DX.375LG-NOM	28480	9100-1629
A4A7L16	9100-1643	2		COIL-MLD 300UH 5% Q=65 .19DX.44LG-NOM	28480	9100-1643
A4A7L17	9140-0114	4	6	COIL-MLD 10UH 10% Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A7L18	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A7L19	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A7L20	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A7L21	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A7L22	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX.375LG-NOM	28480	9140-0114
A4A7Q1	1853-0034	0	6	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A7Q2	1855-0081	1	5	TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A4A7Q3	1854-0404	0	5	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A7Q4	1854-0023	9	5	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A4A7Q5	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A7Q6	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A4A7Q7	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A7Q8	1854-0023	9		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A4A7Q9	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A7Q10	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A4A7Q11	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A7Q12	1854-0023	9		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A4A7Q13	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A7Q14	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A4A7Q15	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A7Q16	1854-0023	9		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A4A7Q17	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A7Q18	1855-0081	1		TRANSISTOR J-FET N-CHAN D-MODE SI	01295	2N5245
A4A7Q19	1854-0023	9		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A4A7Q20	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A7Q21	1853-0034	0		TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A4A7Q22	1854-0345	8	1	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4A7R1	0757-0441	8	1	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A4A7R2	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A4A7R3	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A4A7R4	0757-0401	0	9	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R5	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A7R6	0698-3154	0	5	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F
A4A7R7	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A7R8	0757-0379	1	3	RESISTOR 12.1 1% .125W F TC=0+-100	19701	MF4C1/8-T0-12R1-F
A4A7R9	0757-0397	3	1	RESISTOR 68.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A4A7R10	0698-3447	4	6	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A4A7R11	0757-0420	3	5	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A4A7R12*	0757-0444	1	4	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1212-F
A4A7R13*	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1212-F
A4A7R14	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R15	0757-0405	4	5	RESISTOR 162 1% .125W F TC=0+-100	24546	C4-1/8-T0-162R-F
A4A7R16	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A7R17	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F
A4A7R18	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A7R19	0757-0379	1	3	RESISTOR 12.1 1% .125W F TC=0+-100	19701	MF4C1/8-T0-12R1-F
A4A7R20	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R21	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A4A7R22	0757-0420	3	5	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A4A7R23*	0757-0444	1	4	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1212-F
A4A7R24*	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1212-F
A4A7R25	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R26	0757-0405	4	1	RESISTOR 162 1% .125W F TC=0+-100	24546	C4-1/8-T0-162R-F
A4A7R27	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A7R28	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F
A4A7R29	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A7R30	2100-3426	6	4	RESISTOR-TRMR 20 10% C SIDE-ADJ 1-TRN	28480	2100-3426
A4A7R31	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R32	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A4A7R33	0757-0420	3	5	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A4A7R34*	0757-0289	2	6	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A4A7R35*	0757-0289	2	6	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A4A7R36	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R37	0757-0405	4	1	RESISTOR 162 1% .125W F TC=0+-100	24546	C4-1/8-T0-162R-F
A4A7R38	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A7R39	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F
A4A7R40	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A7R41	2100-3426	6	4	RESISTOR-TRMR 20 10% C SIDE-ADJ 1-TRN	28480	2100-3426
A4A7R42	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R43	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A4A7R44	0757-0420	3	5	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A4A7R45*	0757-0289	2	6	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A4A7R46*	0757-0289	2	6	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A4A7R47	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R48	0757-0405	4	1	RESISTOR 162 1% .125W F TC=0+-100	24546	C4-1/8-T0-162R-F
A4A7R49	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A4A7R50	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F
A4A7R51	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A4A7R52	0757-0379	1	3	RESISTOR 12.1 1% .125W F TC=0+-100	19701	MF4C1/8-T0-12R1-F
A4A7R53	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R54	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A4A7R55	0757-0420	3	5	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A4A7R56*	0757-0289	2	6	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A4A7R57*	0757-0289	2	6	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A4A7R58	0757-0405	4	1	RESISTOR 162 1% .125W F TC=0+-100	24546	C4-1/8-T0-162R-F
A4A7R59	0698-3438	3	1	RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0-147R-F
A4A7R60*	0757-0276	7	6	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-61R9-F
A4A7R61	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A4A7R62	0698-3435	0	1	RESISTOR 38.3 1% .125W F TC=0+-100	24546	C4-1/8-T0-38R3-F
A4A7R63	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R64	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R65	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A4A7R66*	0757-0276	7	6	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-61R9-F
A4A7R67	0698-3443	0	5	RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A4A7R68*	0698-3437	2	5	RESISTOR 133 1% .125W F TC=0+-100	24546	C4-1/8-T0-133R-F
A4A7R69	0698-0082	7	5	RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0-464R-F
A4A7R70*	0757-0416	7	18	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R71	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R72*	0698-0083	8	5	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A4A7R73	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R74*	0757-0276	7	6	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-61R9-F
A4A7R75	0698-3443	0	5	RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A4A7R76*	0698-3437	2	5	RESISTOR 133 1% .125W F TC=0+-100	24546	C4-1/8-T0-133R-F
A4A7R77	0698-0082	7	5	RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0-464R-F
A4A7R78*	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R79	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A4A7R80*	0698-0083	8	5	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A7R81	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R82*	0757-0276	7		RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4=1/8-T0-61R9-F
A4A7R83	0698-3443	0		RESISTOR 287 1% .125W F TC=0+-100	24546	C4=1/8-T0-287R-F
A4A7R84*	0698-3437	2		RESISTOR 133 1% .125W F TC=0+-100	24546	C4=1/8-T0-133R-F
A4A7R85	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4=1/8-T0-4640-F
A4A7R86*	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R87	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R88*	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A4A7R89	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R90*	0757-0276	7		RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4=1/8-T0-61R9-F
A4A7R91	0698-3443	0		RESISTOR 287 1% .125W F TC=0+-100	24546	C4=1/8-T0-287R-F
A4A7R92*	0698-3437	2		RESISTOR 133 1% .125W F TC=0+-100	24546	C4=1/8-T0-133R-F
A4A7R93	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4=1/8-T0-4640-F
A4A7R94*	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R95	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R96*	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A4A7R97	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R98*	0757-0276	7		RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4=1/8-T0-61R9-F
A4A7R99	0698-3443	0		RESISTOR 287 1% .125W F TC=0+-100	24546	C4=1/8-T0-287R-F
A4A7R100*	0698-3437	2		RESISTOR 133 1% .125W F TC=0+-100	24546	C4=1/8-T0-133R-F
A4A7R101	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4=1/8-T0-4640-F
A4A7R102*	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R103	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R104*	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A4A7R105	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A4A7R106	0757-0465	6	4	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A4A7R107	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A4A7R108	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A4A7R109	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A4A7R130	2100-3426	6		RESISTOR-TRMR 20 10% C SIDE=ADJ 1-TRN	28480	2100-3426
A4A7R141	2100-3426	6		RESISTOR-TRMR 20 10% C SIDE=ADJ 1-TRN	28480	2100-3426
A4A7TP1	0360-1788	7	10	CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP2	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP3	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP4	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP5	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP6	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP7	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP8	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP9	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7TP10	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-SZ SQ	28480	0360-1788
A4A7Y1-Y5	0410-0404	9	1	CRYSTAL-QUARTZ MATCHED SET OF 5	00136	0410-0404
	0410-0404	9		A4A7 MISCELLANEOUS PARTS		
	0410-0404	9				
	6960-0016	0	1	PLUG-HOLE TR-HD FOR .125-D-HOLE NYL	28480	6960-0016

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A8	85662-60003	3	1	BOARD ASSEMBLY, ATTENUATOR-BANDWIDTH FLT	28480	85662-60003
A4A8C1	0140-0200	0	1	CAPACITOR-FXD 390PF +-5% 300VDC MICA	72136	DM15F391J0300HV1CR
A4A8C2	0160-2055	9	46	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C3	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C4	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C5	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C6	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C7	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C8	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C9	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C10				NOT ASSIGNED		
A4A8C11	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C12	0160-2257	3	2	CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A4A8C13	0121-0059	7	2	CAPACITOR-V TRMR-CER 2-8PF 350V PC-MTG	52763	304324 2/8PF NPD
A4A8C14*	0160-2249	3	2	CAPACITOR-FXD 4.7PF +--.25PF 500VDC CER	28480	0160-2249
A4A8C15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C17	0160-2207	3	2	CAPACITOR-FXD 300PF +-5% 300VDC MICA	28480	0160-2207
A4A8C18	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C19	0160-4297	5	4	CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101H223Z822=CDH
A4A8C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C21	0160-3456	6	2	CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A4A8C22	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C26	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101H223Z822=CDH
A4A8C27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C29	0121-0446	6	2	CAPACITOR-V TRMR-CER 4.5-20PF 160V	28480	0121-0446
A4A8C30	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C31	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C32	0121-0036	0	2	CAPACITOR-V TRMR-CER 5.5-18PF 350V	52763	304324 5.5/18PF NPD
A4A8C33	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C34	0160-3431	7	2	CAPACITOR-FXD 6.8PF +--.5PF 500VDC CER	28480	0160-3431
A4A8C35*	0140-0194	1	4	CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DM15F111J0300HV1CR
A4A8C36	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C37	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C38	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C39	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101H223Z822=CDH
A4A8C40	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C41	0160-2257	3		CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A4A8C42	0121-0059	7		CAPACITOR-V TRMR-CER 2-8PF 350V PC-MTG	52763	304324 2/8PF NPD
A4A8C43*	0160-2249	3		CAPACITOR-FXD 4.7PF +--.25PF 500VDC CER	28480	0160-2249
A4A8C44	0121-0446	6		CAPACITOR-V TRMR-CER 4.5-20PF 160V	28480	0121-0446
A4A8C45	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C46	0121-0036	0		CAPACITOR-V TRMR-CER 5.5-18PF 350V	52763	304324 5.5/18PF NPD
A4A8C47	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C48	0160-3431	7		CAPACITOR-FXD 6.8PF +--.5PF 500VDC CER	28480	0160-3431
A4A8C49*	0140-0194	1		CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DM15F111J0300HV1CR
A4A8C50	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A4A8C51	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C52	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C53	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C54	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C55	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C56	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C57	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C58	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C59	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C60	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101H223Z822=CDH
A4A8C61	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C62	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C63	0140-0194	1		CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DM15F111J0300HV1CR
A4A8C63*	0140-0194	1		CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DM15F111J0300HV1CR
A4A8C64	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C65	0160-2055	9	2	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C66	0121-0452	4		CAPACITOR-V TRMR-AIR 1.3-5.4PF 250V	74970	187-0103-005
A4A8C67	0121-0452	4		CAPACITOR-V TRMR-AIR 1.3-5.4PF 250V	74970	187-0103-005
A4A8C68	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C69	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A8C70	0160-2207	3	2	CAPACITOR-FXD 300PF +-5% 300VDC MICA	28480	0160-2207
A4A8C71	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C72	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A8C73	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A4A8C74	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8C75	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A8CR1				NOT ASSIGNED		
A4A8CR2	1901-0050	3	2	DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A4A8CR3	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A4A8CR4	1901-0047	8	6	DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A8CR5	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A8CR6	1901-1070	9	5	DIODE-IPIN	28480	1901-1070
A4A8CR7	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A8CR8	1901-0535	9	5	DIODE-SCHOTTKY	28480	1901-0535
A4A8CR9	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A8CR10	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A8CR11	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A8CR12	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A8CR13	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A8CR14	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A8CR15	1901-0047	8		DIODE-SWITCHING 20V 75MA 10NS	28480	1901-0047
A4A8CR16	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4A8CR17	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A8CR18	1901-1070	9		DIODE-IPIN	28480	1901-1070
A4A8CR19	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A4ABE1	9170-0029	3	12	CORE-SHIELDING BEAD	28480	9170-0029
A4ABE2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE3	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE4	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE5	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE6	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE7	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE8	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE9	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE10	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE11	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABE12	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A4ABJ1	1250-0690	6	1	CONNECTOR-RF SMB M 8GL-HOLE-PR 50-OHM	28480	1250-0690
A4ABL1	9100-1610	3	1	COIL-MLD 150NH 20% Q=50 .155DX,375LG-NOM	28480	9100-1610
A4ABL2	9140-0179	1	2	COIL-MLD 22UH 10% Q=75 .155DX,375LG-NOM	28480	9140-0179
A4ABL3	9100-1641	0	2	COIL-MLD 240UH 5% Q=65 .155DX,375LG-NOM	28480	9100-1641
A4ABL4	9100-1618	1	4	COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4ABL5	9140-0114	4	3	COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A4ABL6	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A4ABL7	9100-3854	1	2	COIL 400NH 5% Q=150 .3DX1.016LG-NOM	28480	9100-3854
A4ABL8	9140-0098	3	2	COIL-MLD 2.2UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0098
A4ABL9	9100-1620	5	3	COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A4ABL10	9100-1641	0		COIL-MLD 240UH 5% Q=65 .155DX,375LG-NOM	28480	9100-1641
A4ABL11	9100-1618	1		COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4ABL12	9100-1618	1		COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4ABL13	9140-0114	4		COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A4ABL14	9100-3854	1		COIL 400NH 5% Q=150 .3DX1.016LG-NOM	28480	9100-3854
A4ABL15	9100-1620	5		COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A4ABL16	9100-1620	5		COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A4ABL17	9140-0098	3		COIL-MLD 2.2UH 10% Q=33 .155DX,375LG-NOM	28480	9140-0098
A4ABL18				NOT ASSIGNED		
A4ABL19	9100-1618	1		COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A4ABL20	9140-0179	1		COIL-MLD 22UH 10% Q=75 .155DX,375LG-NOM	28480	9140-0179
A4ABL21=						
A4ABL32				NOT ASSIGNED		
A4ABL33	9140-0158	6	1	COIL-MLD 1UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0158
A4ABQ1	1854-0345	8	1	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A4ABQ2	1853-0007	7	5	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4ABQ3	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4ABQ4	1855-0267	5	3	TRANSISTOR J-FET N-CHAN D-MODE TO-92 SI	28480	1855-0267
A4ABQ5	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4ABQ6	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4ABQ7	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4ABQ8	1855-0267	5		TRANSISTOR J-FET N-CHAN D-MODE TO-92 SI	28480	1855-0267
A4ABQ9	1853-0007	7		TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A4ABQ10	1855-0267	5		TRANSISTOR J-FET N-CHAN D-MODE TO-92 SI	28480	1855-0267
A4ABQ11	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4AAR1	0757-0395	1	1	RESISTOR 56.2 1% .125W F TC0+-100	24546	C4-1/8-T0-56R2-F
A4AAR2	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC0+-100	24546	C4-1/8-T0-1961-F
A4AAR3	0757-0401	0	5	RESISTOR 100 1% .125W F TC0+-100	24546	C4-1/8-T0-101-F
A4AAR4	0757-0294	9	1	RESISTOR 17.8 1% .125W F TC0+-100	19701	MF4C1/8-T0-17R8-F
A4AAR5	0757-0401	0		RESISTOR 100 1% .125W F TC0+-100	24546	C4-1/8-T0-101-F
A4AAR6	2100-3053	5	1	RESISTOR-TRMR 20 20% C SIDE=ADJ 17-TRN	02111	43P200
A4AAR7	2100-3052	4	2	RESISTOR-TRMR 50 20% C SIDE=ADJ 17-TRN	02111	43P500
A4AAR8	0757-0416	7	1	RESISTOR 511 1% .125W F TC0+-100	24546	C4-1/8-T0-511R-F
A4AAR9	0698-3260	9	2	RESISTOR 464K 1% .125W F TC0+-100	28480	0698-3260
A4AAR10	0698-3260	9		RESISTOR 464K 1% .125W F TC0+-100	28480	0698-3260
A4AAR11	0757-0280	3	8	RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR12	0757-0401	0		RESISTOR 100 1% .125W F TC0+-100	24546	C4-1/8-T0-101-F
A4AAR13	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR14	0698-3155	1	2	RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A4AAR15	0698-0082	7	3	RESISTOR 464 1% .125W F TC0+-100	24546	C4-1/8-T0-4640-F
A4AAR16	0698-3429	2	1	RESISTOR 19.6 1% .125W F TC0+-100	03888	PME55-1/8-T0-19R6-F
A4AAR17	0757-0443	0	2	RESISTOR 11K 1% .125W F TC0+-100	24546	C4-1/8-T0-1102-F
A4AAR18	0757-0438	3	4	RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A4AAR19	0757-0465	6	1	RESISTOR 100K 1% .125W F TC0+-100	24546	C4-1/8-T0-1003-F
A4AAR20	0698-3441	8	2	RESISTOR 215 1% .125W F TC0+-100	24546	C4-1/8-T0-215R-F
A4AAR21	0698-3444	1	2	RESISTOR 316 1% .125W F TC0+-100	24546	C4-1/8-T0-316R-F
A4AAR22	0698-3442	9	2	RESISTOR 237 1% .125W F TC0+-100	24546	C4-1/8-T0-237R-F
A4AAR23	0757-0279	0	2	RESISTOR 3.16K 1% .125W F TC0+-100	24546	C4-1/8-T0-3161-F
A4AAR24*	0757-0346	2	1	RESISTOR 10 1% .125W F TC0+-100	24546	C4-1/8-T0-100R-F
A4AAR25	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR26*	0757-0441	8	1	RESISTOR 8.25K 1% .125W F TC0+-100	24546	C4-1/8-T0-8251-F
A4AAR27	0757-0290	5	4	RESISTOR 6.19K 1% .125W F TC0+-100	19701	MF4C1/8-T0-6191-F
A4AAR28	0757-0290	5		RESISTOR 6.19K 1% .125W F TC0+-100	19701	MF4C1/8-T0-6191-F
A4AAR29*	0757-0317	7	1	RESISTOR 1.33K 1% .125W F TC0+-100	24546	C4-1/8-T0-1331-F
A4AAR30*	0698-3152	8	1	RESISTOR 3.48K 1% .125W F TC0+-100	24546	C4-1/8-T0-3481-F
A4AAR31	0698-3156	2	4	RESISTOR 14.7K 1% .125W F TC0+-100	24546	C4-1/8-T0-1472-F
A4AAR32	0698-3156	2		RESISTOR 14.7K 1% .125W F TC0+-100	24546	C4-1/8-T0-1472-F
A4AAR33	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR34*				*FACTORY SELECTED PART-NORMALLY OPEN		
A4AAR35	2100-3165	0	1	RESISTOR-TRMR 2M 20% C SIDE=ADJ 17-TRN	02111	43P205
A4AAR36*				*FACTORY SELECTED PART-NORMALLY OPEN		
A4AAR37				NOT ASSIGNED		
A4AAR38	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC0+-100	24546	C4-1/8-T0-1471-F
A4AAR39	0757-0442	9	3	RESISTOR 10K 1% .125W F TC0+-100	24546	C4-1/8-T0-1002-F
A4AAR40	2100-3052	4		RESISTOR-TRMR 50 20% C SIDE=ADJ 17-TRN	02111	43P500
A4AAR41	0757-0401	0		RESISTOR 100 1% .125W F TC0+-100	24546	C4-1/8-T0-101-F
A4AAR42	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR43	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A4AAR44	0698-0082	7		RESISTOR 464 1% .125W F TC0+-100	24546	C4-1/8-T0-4640-F
A4AAR45	0757-0443	0		RESISTOR 11K 1% .125W F TC0+-100	24546	C4-1/8-T0-1102-F
A4AAR46	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A4AAR47	0698-3441	8		RESISTOR 215 1% .125W F TC0+-100	24546	C4-1/8-T0-215R-F
A4AAR48	0698-3444	1		RESISTOR 316 1% .125W F TC0+-100	24546	C4-1/8-T0-316R-F
A4AAR49	0698-3442	9		RESISTOR 237 1% .125W F TC0+-100	24546	C4-1/8-T0-237R-F
A4AAR50	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR51	0757-0279	0		RESISTOR 3.16K 1% .125W F TC0+-100	24546	C4-1/8-T0-3161-F
A4AAR52*	0757-0288	1	2	RESISTOR 9.09K 1% .125W F TC0+-100	24546	C4-1/8-T0-9091-F
A4AAR53	0757-0290	5		RESISTOR 6.19K 1% .125W F TC0+-100	19701	MF4C1/8-T0-6191-F
A4AAR54	0757-0290	5		RESISTOR 6.19K 1% .125W F TC0+-100	19701	MF4C1/8-T0-6191-F
A4AAR55*	0757-0288	1		RESISTOR 9.09K 1% .125W F TC0+-100	24546	C4-1/8-T0-9091-F
A4AAR56	0698-3156	2		RESISTOR 14.7K 1% .125W F TC0+-100	24546	C4-1/8-T0-1472-F
A4AAR57	0698-3156	2		RESISTOR 14.7K 1% .125W F TC0+-100	24546	C4-1/8-T0-1472-F
A4AAR58	0698-3440	7	1	RESISTOR 196 1% .125W F TC0+-100	24546	C4-1/8-T0-196R-F
A4AAR59	0698-0082	7		RESISTOR 464 1% .125W F TC0+-100	24546	C4-1/8-T0-4640-F
A4AAR60	0698-3154	0	2	RESISTOR 4.22K 1% .125W F TC0+-100	24546	C4-1/8-T0-4221-F
A4AAR61	0698-3154	0		RESISTOR 4.22K 1% .125W F TC0+-100	24546	C4-1/8-T0-4221-F
A4AAR62	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR63	0698-3443	0	1	RESISTOR 287 1% .125W F TC0+-100	24546	C4-1/8-T0-287R-F
A4AAR64	0757-0401	0		RESISTOR 100 1% .125W F TC0+-100	24546	C4-1/8-T0-101-F
A4AAR65				NOT ASSIGNED		
A4AAR66	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A4AAR67	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A4AAR68	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A4AAR69	0757-0442	9		RESISTOR 10K 1% .125W F TC0+-100	24546	C4-1/8-T0-1002-F
A4AAR70	0757-0442	9		RESISTOR 10K 1% .125W F TC0+-100	24546	C4-1/8-T0-1002-F
A4AATP1	0360-1788	7	4	CONNECTOR-SGL CONT PIN .045-IN-BSC-82 80	28480	0360-1788
A4AATP2	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-82 80	28480	0360-1788
A4AATP3	1251-0600	0	5	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 80	28480	1251-0600
A4AATP4	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-82 80	28480	0360-1788
A4AATP5	0360-1788	7		CONNECTOR-SGL CONT PIN .045-IN-BSC-82 80	28480	0360-1788

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A8TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A4A8TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A4A8TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A4A8TP9	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A4A8VR1	1902-3139	7	1	DIODE-ZNR 8.25V 5% DO-7 PD=.4W TC=+.053%	28480	1902-3139
A4A8Y1-Y2	0410-1029	6	1	CRYSTAL, 21.4 MHZ, SET OF SIX INCLUDES A4A4Y1-Y3, A4A6A1Y1) A4A8 MISCELLANEOUS	28480	0410-1029
	86701-40001	9	1	EXTRACTOR, PC BOARD	28480	86701-40001
	6960-0016	0	1	PLUG-HOLE TR-HD FOR .125-D-HOLE NYL	28480	6960-0016

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A9	85662-60089	5	1	BOARD ASSEMBLY, IF CONTROL	28480	85662-60089
A4A9C1	0180-0197	8	5	CAPACITOR-FXD 2.2UF+-10% 20VDC 1A	56289	150D225X9020A2
A4A9C2	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC 1A	56289	150D225X9020A2
A4A9C3	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC 1A	56289	150D225X9020A2
A4A9C4	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC 1A	56289	150D225X9020A2
A4A9C5	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC 1A	56289	150D225X9020A2
A4A9C6	0160-2055	9	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A9C7	0160-3878	6	4	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A9C8	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A9C9	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A9C10	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A9CR1	1901-0040	1	12	DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR3				NOT ASSIGNED		
A4A9CR4	1901-0050	3	6	DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A4A9CR5	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A4A9CR6	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR7	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR8	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A4A9CR9	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A4A9CR10	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A4A9CR11	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR12	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR13	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR14	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR15	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR16	1910-0016	0	2	DIODE-GE 60V 60MA 1U8 DO-7	28480	1910-0016
A4A9CR17	1910-0016	0		DIODE-GE 60V 60MA 1U8 DO-7	28480	1910-0016
A4A9CR18	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR19	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR20	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A4A9CR21	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A4A9L1	9100-1618	1	1	COIL-MLD 5.6UH 10% Q=45 .155DX.375LG-NOM	28480	9100-1618
A4A9Q1	1854-0477	7	1	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A4A9Q2	1853-0281	9	9	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q3	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q4	1854-0404	0	19	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q5	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q6	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q7	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q8	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q9	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q10	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q11	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q12	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q13	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q14	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q15	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q16	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q17	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q18	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q19	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q20	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q21	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q22	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q23	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q24	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A4A9Q25	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q26	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q27	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q28	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9Q29	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A4A9R1	0698-0085	0	17	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R2	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R3	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R4	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R5	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R6	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R7	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R8	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R9	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R10	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A9R11	0698-0085	0	10	RESISTOR 2,61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R12	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R13	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1001-F
A4A9R14	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R15	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R16	0757-0317	7	1	RESISTOR 1,33K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1331-F
A4A9R17	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R18	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R19	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R20	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R21	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R22	0698-3160	8		RESISTOR 31,6K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3162-F
A4A9R23	0757-0467	8		RESISTOR 121K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1211-F
A4A9R24	0698-3158	4		RESISTOR 23,7K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2372-F
A4A9R25	0757-0459	8		RESISTOR 56,2K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5622-F
A4A9R26	0757-0458	7	2	RESISTOR 51,1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5112-F
A4A9R27	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R28	0757-0458	7		RESISTOR 51,1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5112-F
A4A9R29	0757-0420	3		RESISTOR 750 1% .125W F TC=0+-100	24546	C4=1/8-T0-751-F
A4A9R30	0757-0438	3		RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R31	0757-0438	3	3	RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R32	0757-0438	3		RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R33	0757-0438	3		RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R34	0757-0438	3		RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R35	0757-0438	3		RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R36	0757-0438	3	3	RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R37	0698-0085	0		RESISTOR 2,61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R38	0698-0085	0		RESISTOR 2,61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R39	0698-0085	0		RESISTOR 2,61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R40		0		NOT ASSIGNED		
A4A9R41	0698-8824	1	1	RESISTOR 562K 1% .125W F TC=0+-100	28480	0698-8824
A4A9R42	0698-3455	4		RESISTOR 261K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2613-F
A4A9R43	0698-0085	0		RESISTOR 2,61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R44	0757-0428	1		RESISTOR 1,62K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1621-F
A4A9R45	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1001-F
A4A9R46	0757-0419	0	2	RESISTOR 681 1% .125W F TC=0+-100	24546	C4=1/8-T0-681R-F
A4A9R47	0757-0438	3		RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R48	0698-0083	8		RESISTOR 1,96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A4A9R49	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A9R50	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A9R51	0698-0083	8	1	RESISTOR 1,96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A4A9R52	0698-3150	6		RESISTOR 2,37K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2371-F
A4A9R53	0698-3158	4		RESISTOR 23,7K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2372-F
A4A9R54	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A4A9R55	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A4A9R56	0757-0279	0	2	RESISTOR 3,16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A4A9R57	0698-3153	9		RESISTOR 3,83K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3831-F
A4A9R58	0698-0085	0		RESISTOR 2,61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R59	0698-0085	0		RESISTOR 2,61K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2611-F
A4A9R60	2100-3109	2		RESISTOR-TRMR 2K 10% C SIDE-ADJ 17-TRN	02111	43P202
A4A9R61	2100-3103	6	1	RESISTOR-TRMR 10K 10% C SIDE-ADJ 17-TRN	02111	43P103
A4A9R62	2100-3054	6		RESISTOR-TRMR 50K 10% C SIDE-ADJ 17-TRN	02111	43P503
A4A9R63	0757-0419	0		RESISTOR 681 1% .125W F TC=0+-100	24546	C4=1/8-T0-681R-F
A4A9R64	0757-0438	3		RESISTOR 5,11K 1% .125W F TC=0+-100	24546	C4=1/8-T0-5111-F
A4A9R65	2100-3094	4		RESISTOR-TRMR 100K 10% C SIDE-ADJ 17-TRN	02111	43P104
A4A9R66	2100-3161	6	1	RESISTOR-TRMR 20K 10% C SIDE-ADJ 17-TRN	02111	43P203
A4A9R67	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A4A9R68	0757-0279	0		RESISTOR 3,16K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3161-F
A4A9R69	0698-3455	4		RESISTOR 261K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2613-F
A4A9R70	0698-3456	5		RESISTOR 287K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2873-F
A4A9R71	0698-3453	2	1	RESISTOR 196K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1963-F
A4A9TP1	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ 90	28480	1251-0600
A4A9TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ 90	28480	1251-0600
A4A9U1	1826-0092	3		IC OP AMP T0=99	28480	1826-0092
A4A9U2	1820-1418	7		IC DCDR TTL LS BCD-TO-DEC 4-TO-10-LINE	01295	8N74L842N
A4A9U3	1820-1195	7	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74L8175N
A4A9U4	1820-1418	7		IC DCDR TTL LS BCD-TO-DEC 4-TO-10-LINE	01295	8N74L842N
A4A9U5	1810-0206	8		NETWORK-RES 8-PIN-SIP .1-PIN-8PCG	11236	750-81-R10K
A4A9U6	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A4A9U7	1820-1216	3		IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	8N74L8138N
A4A9U8	1820-1196	8	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A4A9U9	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A4A9U10	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A9U11	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A4A9U12	1820-1418	7		IC DCDR TTL LS BCD-TO-DEC 4-TO-10-LINE	01295	SN74LS42N
A4A9U13	1820-0668	7	1	IC BFR TTL NON-INV HEX 1-INP	01295	SN7407N
A4A9VR	1902-3203	6		1	28480	1902-3203
A4A9VR1	1902-0041	4	1	DIODE-ZNR 5.11V 5% DO-7 PD=,4W TC=-,009%	28480	1902-0041

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A4A10	85662-60020	4	1	BOARD ASSEMBLY, IF-VIDEO MOTHER BOARD	28480	85662-60020
A4A10C1	0180-1746	5	2	CAPACITOR-FXD .15UF+-10% 20VDC TA	56289	150D156X902082
A4A10C2	0180-0229	7	1	CAPACITOR-FXD .33UF+-10% 10VDC TA	56289	150D336X901082
A4A10C3	0180-1746	5		CAPACITOR-FXD .15UF+-10% 20VDC TA	56289	150D156X902082
A4A10C4	0160-4297	5	13	CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C5	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C6	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C7	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C8	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C9	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C10	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C11	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C12	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C13	0160-2055	9	2	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A10C14	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A10C16	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C17	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C18	0160-4297	5		CAPACITOR-FXD .022UF +80-20% 100VDC CER	56289	C023F101M223ZS22=CDH
A4A10C19	0160-3878	6	4	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A10C20	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A10C21	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A10C22	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A4A10C23	0160-3879	7	1	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A4A10J1	1251-4828	2	1	CONNECTOR 50-PIN M POST TYPE	28480	1251-4828
A4A10J2	1251-3276	2	1	CONNECTOR 6-PIN M POST TYPE	28480	1251-3276
A4A10L1	9100-1618	1	11	COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L2	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L3	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L4	08558-80011	6	3	FILTER, COIL, BLUE	28480	08558-80011
A4A10L5	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A4A10L6	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A4A10L7	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L8	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L9	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L10	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L11	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L12	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L13	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10L14	9100-1618	1		COIL-MLD 5.6UH 10% Q#45 .155DX.375LG-NOM	28480	9100-1618
A4A10R1	0757-0401	0	4	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A4A10R2	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A4A10R3	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A4A10R4	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A4XA1P1	1251-0472	4	15	CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA1P2	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA2P1	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA2P2	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA3P1	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA3P2	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA4P1	1251-0472	8	1	CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA4P2	1251-0472	8		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA5P1	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA5P2	1251-2034	8		CONNECTOR-PC EDGE 10-CONT/ROW 2-ROWS	28480	1251-2034
A4XA6A1P1	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA6A2P1	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA7P1	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA7P2	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA8P1	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA8P2	1251-0472	4		CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472
A4XA9P1	1251-0472	8	2	CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-0472
A4XA9P2	1251-0472	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-0472

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A5	85660-60005	3	1	FRONT PANEL ASSEMBLY (INCLUDES A5A1 AND A5A2)	28480	85660-60005
A5D31	1990-0487	7	10	LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5D32	1990-0486	6	2	LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4684
A5D33	1990-0486	6		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4684
A5B1	3101-2193	5	1	SWITCH-TGL SUBMIN SPDT 2A 250VAC	28480	3101-2193
A5A1	85660-60001	9	1	BOARD ASSEMBLY, KEYBOARD	28480	85660-60001
A5A1C1	0160-2055	9	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A5A1D31	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D32	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D33	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D34	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D35	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D36	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D37	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D38	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1D39	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A5A1E1	1251-0600	0	11	CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E3	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E4	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E5	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E6	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E7	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E8	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E9	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E10	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1E11	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A5A1J1	1200-0507	9	1	SOCKET-IC 16-CONT DIP-SLDR	28480	1200-0507
A5A1P1	1251-5549	6	1	CONNECTOR-HDR 50-CONT, 2 ROWS OF 25	28480	1251-5549
A5A1Q1	1854-0477	7	1	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A5A1R1	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A5A1R2	0698-3152	8	1	RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3481-F
A5A1R3	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A5A1S1- A5A1S49	5060-9436	7	49	SWITCH, P.C. BOARD	28480	5060-9436
A5A1U1	1810-0229	5	2	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R330
A5A1U2	1820-1196	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A5A1U3	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A5A1U4	1810-0229	5		NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R330
A5A1XD31	1200-0010	9	9	SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD32	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD33	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD34	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD35	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD36	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD37	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD38	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A1XD39	1200-0010	9		SOCKET-TUBE 2-CONT	28480	1200-0010
A5A2	5060-0329	9	1	ROTARY PULSE GENERATOR	28480	5060-0329

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6				RF MODULE		
A6J1				PART OF A6W16 (CAL OUTPUT)		
A6J2	1250-1251	7	1	ADAPTER=COAX STR F-SMA F-SMA	28480	1250-1251
A6J3	86290-60005	7	1	CONNECTOR, TYPE N (RF INPUT) (SEE FIGURE 6-11 FOR PARTS BREAKDOWN)	28480	86290-60005
A6M1	2100-1717	4	1	RESISTOR=VAR CONTROL CCP 50K 20% LIN	28480	2100-1717
A6M1	85660-20073	1	1	CABLE ASSEMBLY, J1 (RF INPUT) TO A6A2 (RF ATTENUATOR)	28480	85660-20073
A6M2	85660-20074	2	1	CABLE ASSEMBLY, A6A2 (RF ATTENUATOR) TO A6A1 (RF SWITCH)	28480	85660-20074
A6M3	85660-20075	3	1	CABLE ASSEMBLY, A6A1 (RF SWITCH) TO A6A8 (YTX)	28480	85660-20075
A6M4	85660-20079	7	1	CABLE ASSEMBLY, A6A14 (LIMITER) TO A6A6 (FIRST CONVERTER)	28480	85660-20079
A6M5	85660-20076	4	1	CABLE ASSEMBLY, A6A8 (YTX) TO A6A5 (ACLU)	28480	85660-20076
A6M6	85660-20077	5	1	CABLE ASSEMBLY, A6A5 (ACLU LO IN) TO W11 CABLE ASSEMBLY FROM A11A1	28480	85660-20077
A6M7	85660-20082	2	1	CABLE ASSEMBLY, A6A5 (ACLU) TO A6A6 (FIRST CONVERTER)	28480	85660-20082
A6M8	85660-20104	9	1	CABLE ASSEMBLY, 1ST LO OUTPUT	28480	85660-20104
A6M9	85660-20080	0	1	NOT ASSIGNED	28480	85660-20080
A6M10	85660-20081	1	1	CABLE ASSEMBLY, A6A15 (3.6 GHZ BPF) TO A6A4 (SECOND CONVERTER)	28480	85660-20081
A6M11	85660-60055	3	1	CABLE ASSEMBLY, GREEN, A6A9 (PHASE LOCK) TO A6A4 (SECOND CONVERTER) VTO	28480	85660-60055
A6M12	85660-60097	3	1	CABLE ASSEMBLY, YELLOW, A6A4 (SECOND CONVERTER) TO A6A9U1 (SAMPLER)	28480	85660-60097
A6M13	85660-20113	0	1	CABLE ASSEMBLY, A6A5 (ACLU) TO A6A16 (1.5 GHZ LPF)	28480	85660-20113
A6M14	85660-20112	9	1	CABLE ASSEMBLY, A6A16 (1.5 GHZ LPF) TO A6A4 (SECOND CONVERTER)	28480	85660-20112
A6M15	85660-60057	5	1	CABLE ASSEMBLY, BROWN, A6A4 (SECOND CONVERTER) TO A6A3 (LAST CONVERTER)	28480	85660-60057
A6M16	85660-60058	6	1	CABLE ASSEMBLY, BLACK, CAL OUTPUT	28480	85660-60058
A6M17	85660-60056	4	1	CABLE ASSEMBLY, RED, A6A9 (PHASE LOCK) TO A6A17 (300 MHZ BPF)	28480	85660-60056
A6M18	85660-60054	2	1	CABLE ASSEMBLY, RED, A6A17 (300 MHZ BPF) TO A6A3 (LAST CONVERTER)	28480	85660-60054
A6M19	8120-2847	1	1	CABLE ASSEMBLY, RIBBON, A6A12 (YTX DRIVER) TO A6A7 (YTX CURRENT DRIVER)	28480	8120-2847
A6M20	1250-1397	2	1	CABLE=ADAPTER, SMA MALE TO SMA MALE, A6A1 (RF SWITCH) TO A6A14 (LIMITER)	28480	1250-1397
A6M21	85660-60060	0	1	CABLE ASSEMBLY, WIRE HARNESS (A6R1, A6A1, A6A4 AND A6A5 TO A6A13J4)	28480	85660-60060
A6A1	85660-60101	0	1	RF SWITCH	28480	85660-60101
A6A2	85660-60121	4	1	RF ATTENUATOR/ERROR CORRECTION ROM (INCLUDES A12U8)	28480	85660-60121

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A3	85660-60003	1	1	LAST CONVERTER ASSEMBLY	28480	85660-60003
A6A3L1	9135-0002	8	5	FILTER, LOW PASS	28480	9135-0002
A6A3L2	9135-0002	8		FILTER, LOW PASS	28480	9135-0002
A6A3L3	9135-0002	8		FILTER, LOW PASS	28480	9135-0002
A6A3L4	9135-0002	8		FILTER, LOW PASS	28480	9135-0002
A6A3L5	9135-0002	8		FILTER, LOW PASS	28480	9135-0002
				A6A3 MISCELLANEOUS		
	2190-0124	4	3	WASHER=LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0138	3	33	SCREW=MACH 4-40 .188-IN-LG 100 DEG	00000	ORDER BY DESCRIPTION
	2200-0144	1	34	SCREW=MACH 4-40 .375-IN-LG 100 DEG	00000	ORDER BY DESCRIPTION
	2950-0078	9	3	NUT=HEX=DDL=CHAM 10-32-THD .067-IN-THK	28480	2950-0078
	85660-00009	1	1	TOP COVER	28480	85660-00009
	85660-20066	2	1	HOUSING	28480	85660-20066
	85660-60105	4	1	BOTTOM COVER ASSEMBLY	28480	85660-60105
A6A3A1	85660-60002	0	1	BOARD ASSEMBLY, LAST CONVERTER	28480	85660-60002
A6A3A1C1	0160-3877	5	2	CAPACITOR=FXD 100PF +-20% 200VDC CER	28480	0160-3877
A6A3A1C2	0160-3878	6	8	CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C3	0160-3877	5		CAPACITOR=FXD 100PF +-20% 200VDC CER	28480	0160-3877
A6A3A1C4	0160-3878	6		CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C5	0160-3878	6		CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C6	0160-3878	6		CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C7	0160-2246	0	1	CAPACITOR=FXD 3.6PF +-25PF 500VDC CER	28480	0160-2246
A6A3A1C8	0121-0452	4	5	CAPACITOR=V TRMR=AIR 1.3-5.4PF 250V	74970	187-0103-005
A6A3A1C9	0121-0452	4		CAPACITOR=V TRMR=AIR 1.3-5.4PF 250V	74970	187-0103-005
A6A3A1C10	0121-0452	4		CAPACITOR=V TRMR=AIR 1.3-5.4PF 250V	74970	187-0103-005
A6A3A1C11	0121-0452	4		CAPACITOR=V TRMR=AIR 1.3-5.4PF 250V	74970	187-0103-005
A6A3A1C12	0121-0452	4		CAPACITOR=V TRMR=AIR 1.3-5.4PF 250V	74970	187-0103-005
A6A3A1C13	0160-0572	1	1	CAPACITOR=FXD 2200PF +-20% 100VDC CER	28480	0160-0572
A6A3A1C14	0160-3879	7	31	CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C15	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C16	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C17	0160-3878	6		CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C18	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C19	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C20	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C21	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C22	0160-3653	5	1	CAPACITOR=FXD 33PF +-5% 200VDC CER 0+-30	28480	0160-3653
A6A3A1C23	0121-0046	2	1	CAPACITOR=V TRMR=CER 9-35PF 200V PC=MTG	52763	304322 9/35PF N650
A6A3A1C24	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C25	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C26	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C27	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C28	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C29	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C30	0160-3878	6		CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C31	0160-3878	6		CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C32	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C33	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C34	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C35	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C36	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C37	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C38	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C39	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C40	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C41	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C42	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C43	0160-3878	6		CAPACITOR=FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A3A1C44	0160-3456	6	1	CAPACITOR=FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A6A3A1C45	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C46	0160-0127	2	2	CAPACITOR=FXD 1UF +-20% 25VDC CER	28480	0160-0127
A6A3A1C47	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C48	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C49	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C50	0160-0127	2		CAPACITOR=FXD 1UF +-20% 25VDC CER	28480	0160-0127
A6A3A1C51	0160-4084	8	1	CAPACITOR=FXD .1UF +-20% 50VDC CER	28480	0160-4084
A6A3A1C52	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C53	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A3A1C54	0160-3879	7		CAPACITOR=FXD .01UF +-20% 100VDC CER	28480	0160-3879

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A3A1CR1	1901-0639	4	20	DIODE-PIN 110V	28480	5082-3080
A6A3A1CR2	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR3	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR4	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR5	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR6	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR7	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR8	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR9	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR10	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR11	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR12	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR13	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR14	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR15	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR16	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR17	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR18	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR19	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1CR20	1901-0639	4		DIODE-PIN 110V	28480	5082-3080
A6A3A1E1	0360-0124	3	10	CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E2	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E3	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E4	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E5	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E6	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E7	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E8	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E9	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1E10	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A6A3A1J1	1250-1611	3	3	CONNECTOR-RF SMB M PC 50-OHM	28480	1250-1611
A6A3A1J2	1250-1611	3		CONNECTOR-RF SMB M PC 50-OHM	28480	1250-1611
A6A3A1J3	1250-1611	3		CONNECTOR-RF SMB M PC 50-OHM	28480	1250-1611
A6A3A1L1	9100-2255	4	2	COIL-MLD 470NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2255
A6A3A1L2	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A6A3A1L3	9100-2255	4	2	COIL-MLD 470NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2255
A6A3A1L4	85660-80002	2		COIL, TAPPED	28480	85660-80002
A6A3A1L5	85660-80001	1	3	COIL FILTER	28480	85660-80001
A6A3A1L6	85660-80001	1		COIL FILTER	28480	85660-80001
A6A3A1L7	85660-80001	1		COIL FILTER	28480	85660-80001
A6A3A1L8	85660-80002	2	1	COIL, TAPPED	28480	85660-80002
A6A3A1L9	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A6A3A1L10	9140-0144	0	1	COIL-MLD 4.7UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0144
A6A3A1L11			8	NOT ASSIGNED		
A6A3A1L12	9100-1623	8		COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1L13	9100-1623	8		COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1L14				NOT ASSIGNED		
A6A3A1L15				NOT ASSIGNED		
A6A3A1L16			8	NOT ASSIGNED		
A6A3A1L17				NOT ASSIGNED		
A6A3A1L18	9100-1623	8		COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1L19	9100-1623	8		COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1L20				NOT ASSIGNED		
A6A3A1L21	9100-1623	8	8	COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1L22	9100-1623	8		COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1L23	9100-1623	8		COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1L24	9100-1623	8		COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A6A3A1Q1	1854-0477	7	1	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A3A1Q2	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A6A3A1Q3	1854-0345	8	2	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A6A3A1Q4	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A6A3A1Q5	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A3A1Q6	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A6A3A1Q7	1853-0281	9	1	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A3A1Q8	1854-0686	0		TRANSISTOR NPN SI TO-72 PD=200MW FT=4GHZ	28480	1854-0686
A6A3A1Q9	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A6A3A1Q10	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A6A3A1Q11	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A6A3A1Q12	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A6A3A1R1	0757-0438	3	6	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A6A3A1R2	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A6A3A1R3	0757-0418	9	3	RESISTOR 619 1% .125W F TC=0+-100	24546	C4=1/8-T0=619R-F
A6A3A1R4	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4221-F
A6A3A1R5	0698-8818	3	1	RESISTOR 3.16 1% .125W F TC=0+-100	28480	0698-8818

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A3A1R6	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC0+-100	24546	C4-1/8-T0-2611-F
A6A3A1R7	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC0+-100	24546	C4-1/8-T0-7501-F
A6A3A1R8	0698-3431	6	1	RESISTOR 23.7 1% .125W F TC0+-100	03888	PME55-1/8-T0-23R7-F
A6A3A1R9	0757-0198	2	1	RESISTOR 100 1% .5W F TC0+-100	28480	0757-0198
A6A3A1R10	0757-0419	0	1	RESISTOR 681 1% .125W F TC0+-100	24546	C4-1/8-T0-681R-F
A6A3A1R11	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC0+-100	24546	C4-1/8-T0-1621-F
A6A3A1R12	0757-0278	9	2	RESISTOR 1.78K 1% .125W F TC0+-100	24546	C4-1/8-T0-1781-F
A6A3A1R13	0757-0280	3	3	RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A6A3A1R14	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A6A3A1R15	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A6A3A1R16	0757-0200	7	1	RESISTOR 5.62K 1% .125W F TC0+-100	24546	C4-1/8-T0-5621-F
A6A3A1R17	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC0+-100	24546	C4-1/8-T0-1621-F
A6A3A1R18	0757-0418	9		RESISTOR 619 1% .125W F TC0+-100	24546	C4-1/8-T0-619R-F
A6A3A1R19	0698-3441	8	1	RESISTOR 215 1% .125W F TC0+-100	24546	C4-1/8-T0-215R-F
A6A3A1R20	0698-3132	4	2	RESISTOR 261 1% .125W F TC0+-100	24546	C4-1/8-T0-2610-F
A6A3A1R21	0698-3155	1	2	RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A6A3A1R22	0698-3446	3	1	RESISTOR 383 1% .125W F TC0+-100	24546	C4-1/8-T0-383R-F
A6A3A1R23	0698-3162	0	2	RESISTOR 46.4K 1% .125W F TC0+-100	24546	C4-1/8-T0-4642-F
A6A3A1R24	0757-0416	7	2	RESISTOR 511 1% .125W F TC0+-100	24546	C4-1/8-T0-511R-F
A6A3A1R25	0757-0416	7		RESISTOR 511 1% .125W F TC0+-100	24546	C4-1/8-T0-511R-F
A6A3A1R26	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A6A3A1R27	0698-3449	6	1	RESISTOR 28.7K 1% .125W F TC0+-100	24546	C4-1/8-T0-2872-F
A6A3A1R28	0757-0278	9		RESISTOR 1.78K 1% .125W F TC0+-100	24546	C4-1/8-T0-1781-F
A6A3A1R29	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A6A3A1R30	0698-3132	4		RESISTOR 261 1% .125W F TC0+-100	24546	C4-1/8-T0-2610-F
A6A3A1R31	0698-3155	1		RESISTOR 4.64K 1% .125W F TC0+-100	24546	C4-1/8-T0-4641-F
A6A3A1R32	0757-0418	9		RESISTOR 619 1% .125W F TC0+-100	24546	C4-1/8-T0-619R-F
A6A3A1R33	0698-3162	0		RESISTOR 46.4K 1% .125W F TC0+-100	24546	C4-1/8-T0-4642-F
A6A3A1R34	0757-0417	8	1	RESISTOR 562 1% .125W F TC0+-100	24546	C4-1/8-T0-562R-F
A6A3A1R35	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC0+-100	24546	C4-1/8-T0-1961-F
A6A3A1R36	0698-3439	4	1	RESISTOR 178 1% .125W F TC0+-100	24546	C4-1/8-T0-178R-F
A6A3A1R37	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC0+-100	24546	C4-1/8-T0-51R1-F
A6A3A1R38	0757-0814	9	1	RESISTOR 511 1% .5W F TC0+-100	28480	0757-0814
A6A3A1R39	0757-0442	9	3	RESISTOR 10K 1% .125W F TC0+-100	24546	C4-1/8-T0-1002-F
A6A3A1R40	0757-0442	9		RESISTOR 10K 1% .125W F TC0+-100	24546	C4-1/8-T0-1002-F
A6A3A1R41	0757-0798	8	1	RESISTOR 110 1% .5W F TC0+-100	28480	0757-0798
A6A3A1R42	0757-0438	3		RESISTOR 5.11K 1% .125W F TC0+-100	24546	C4-1/8-T0-5111-F
A6A3A1R43	0757-0280	3		RESISTOR 1K 1% .125W F TC0+-100	24546	C4-1/8-T0-1001-F
A6A3A1R44	0757-0442	9		RESISTOR 10K 1% .125W F TC0+-100	24546	C4-1/8-T0-1002-F
A6A3A1R45	0698-4037	0	1	RESISTOR 46.4 1% .125W F TC0+-100	24546	C4-1/8-T0-46R4-F
A6A3A1R46	0757-0394	0		RESISTOR 51.1 1% .125W F TC0+-100	24546	C4-1/8-T0-51R1-F
A6A3A1U1	0955-0121	1	1	MIXER, DOUBLE BALANCE	28480	0955-0121
A6A3A1VR1	1902-0625	0	1	DIODE-ZNR 1N829 6.2V 5% DO-7 PD=.25W	04713	1N829
A6A3A1 MISCELLANEOUS PARTS						
	1200-0173	5	2	INSULATOR-XSTR DAP-GL	28480	1200-0173
	1205-0226	9	2	HEAT SINK SGL TO-S/TO-39-PKG	28480	1205-0226
	4330-0145	9	6	INSULATOR-BEAD GLASS	28480	4330-0145
A6A4	5086-7248	9	1	SECOND CONVERTER	28480	5086-7248
A6A5	5086-7133	1	1	AMPLIFIER/COUPLER/LOAD UNIT (ACLU)	28480	5086-7133
A6A6	5086-7247	8	1	FIRST CONVERTER	28480	5086-7247

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A7	85660-60128	1	1	BOARD ASSEMBLY, YIG-TUNED MIXER (YTX) CURRENT DRIVER	28480	85660-60128
A6A7C1	0180-0094	4	1	CAPACITOR-FXD 100UF+75-10% 25VDC AL	56289	30D107G025D02
A6A7CR1	1901-1067	4	3	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDM444
A6A7CR2	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDM444
A6A7CR3	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDM444
A6A7DS1	1990-0485	5	1	LED-VISIBLE LUM-INT=800UCD IF=30MA=MAX	28480	5082-4984
A6A7DS2	1990-0486	6	1	LED-VISIBLE LUM-INT=1MCD IF=20MA=MAX	28480	5082-4684
A6A7J1	1251-5146	9	1	CONNECTOR 6-PIN M POST TYPE	28480	1251-5146
A6A7J2	1251-5144	7	1	CONNECTOR 14-PIN M POST TYPE	28480	1251-5144
A6A7Q1	1853-0281	9	2	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A7Q2	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A7Q3	1854-0477	7	1	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A7Q4	1853-0038	4	2	TRANSISTOR PNP SI TO-39 PD=1W FT=100MMZ	28480	1853-0038
A6A7Q5	1853-0038	4		TRANSISTOR PNP SI TO-39 PD=1W FT= 100 MHZ	28480	1853-0038
A6A7Q6	1853-0391	2	1	TRANSISTOR PNP 2N6051 SI DARL TO-3	28480	1853-0391
A6A7Q7	1853-0413	9	1	TRANSISTOR PNP 2N6049 SI TO-46 PD=75W	28480	1853-0413
A6A7Q8	1884-0282	5	1	TRANSISTOR-TRIAC	28480	1884-0282
A6A7R1	0698-3157	3	2	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A6A7R2	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1622-F
A6A7R3	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0=825R-F
A6A7R4	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A7R5	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A6A7R6	0689-3438	3	1	RESISTOR 147 1% .125W F TC=0+-100	24546	C4=1/8-T0=147R-F
A6A7R7	0757-0416	7	2	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A6A7R8	0757-0458	7	2	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5112-F
A6A7R9	0757-0442	9	2	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A7R10	0757-0458	7		RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5112-F
A6A7R11	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A7R12	0698-3635	2	1	RESISTOR 680 5% 2W MO TC=0+-200	28480	0698-3635
A6A7R13	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A6A7R14	0811-0653	0	4	RESISTOR 100 1% 12W PW TC=0+-5	28480	0811-0653
A6A7R15	0811-0653	0		RESISTOR 100 1% 12W PW TC=0+-5	28480	0811-0653
A6A7R16	0811-0653	0		RESISTOR 100 1% 12W PW TC=0+-5	28480	0811-0653
A6A7R17	0811-0653	0		RESISTOR 100 1% 12W PW TC=0+-5	28480	0811-0653
A6A7R18	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A6A7R19	0698-0082	7	1	RESISTOR 464 1% .125W F TC=0+-100	24546	C4=1/8-T0=4640-F
A6A7R20	0757-0416	7	2	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A6A7R21	0698-3395	1	1	RESISTOR 34.8 1% .5W F TC=0+-100	02273	CEC-993
A6A7U1	1826-0261	8	1	IC 741 OP AMP TO-99	28480	1826-0261
A6A7VR1				NOT ASSIGNED		
A6A7VR2	1902-3279	6	1	DIODE-ZNR 28.7V 5% DO-7 PD=.4W TC=+.078%	28480	1902-3279
A6A7VR3				NOT ASSIGNED		
A6A7VR4	1902-0244	9	1	DIODE-ZNR 30.1V 5% DO-15 PD=1W TC=+.075%	28480	1902-0244
				A6A7 MISCELLANEOUS PARTS		
	0340-0162	7	1	INSULATOR-XSTR ALUMINUM	28480	0340-0162
	0520-0128	7	8	SCREW-MACH 2-56 .25-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	0510-0001	4	8	THREADED INSERT-NUT 6-32 .062-LG STL	28480	0510-0001
	1200-0043	8	1	INSULATOR-XSTR ALUMINUM	28480	1200-0043
	1200-0081	4	4	INSULATOR-FLG-B9MG NYLON	28480	1200-0081
	2190-0014	1	8	WASHER-LK INTL T NO. 2 .089-IN-ID	28480	2190-0014
	2200-0107	6	2	SCREW-MACH 4-40 .175-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2200-0109	8	2	SCREW-MACH 4-40 .138-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	4330-0145	9	4	INSULATOR-BEAD GLASS (FOR DS1 AND DS2)	28480	4330-0145
	85660-00023	9	1	HEAT SINK, CURRENT DRIVER	28480	85660-00023
A6A8 (NEW)	5086-7226	3	1	YIG-TUNED MIXER (YTX)	28480	5086-7226
A6A8 (RE-STORED)	5086-6226	1		YIG-TUNED MIXER (YTX) (RE-STORED 5086-7226)	28480	5086-6226
A6A8W1	5061-1053	0	1	CABLE ASSEMBLY, WIRE HARNESS, 4-WIRES (A6A8 TO A6A7J1)	28480	5061-1053

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A9	85660-60098	4	1	PHASE LOCK ASSEMBLY	28480	85660-60098
A6A9C1	0140-4082	4	2	CAPACITOR-FDTHRU 1000PF 20% 200V CER	28480	0140-4082
A6A9C2	0140-4082	4		CAPACITOR-FDTHRU 1000PF 20% 200V CER	28480	0140-4082
A6A9DS1	1990-0485	5	1	LED-VISIBLE LUM-INT#800UCD IF#30MA=MAX	28480	5082-4984
A6A9J1	1250-0544	9	3	CONNECTOR-RF SM-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A6A9J2	1250-0544	9		CONNECTOR-RF SM-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A6A9J3	1250-0544	9		CONNECTOR-RF SM-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A6A9J4	1250-1538	3	1	CONNECTOR, RF SMBF (LOCATED ON A6A9A1)	28480	1250-1538
A6A9J5				NSR, PART OF A6A9U1		
A6A9L1	9135-0002	8	6	FILTER-LOW PASS SOLDER-TERMS	28480	9135-0002
A6A9L2	9135-0002	8		FILTER-LOW PASS SOLDER-TERMS	28480	9135-0002
A6A9L3	9135-0002	8		FILTER-LOW PASS SOLDER-TERMS	28480	9135-0002
A6A9L4	9135-0002	8		FILTER-LOW PASS SOLDER-TERMS	28480	9135-0002
A6A9L5	9135-0002	8		FILTER-LOW PASS SOLDER-TERMS	28480	9135-0002
A6A9L6	9135-0002	8		FILTER-LOW PASS SOLDER-TERMS	28480	9135-0002
A6A9TB1	85660-60008	6	1	BOARD ASSEMBLY, SAMPLER	28480	85660-60008
A6A9TB1E1	1251-3172	7	3	CONNECTOR-SGL CONT SKT .03-IN-BSC-SZ RND	28480	1251-3172
A6A9TB1E2	1251-3172	7		CONNECTOR-SGL CONT SKT .03-IN-BSC-SZ RND	28480	1251-3172
A6A9TB1E3	1251-3172	7		CONNECTOR-SGL CONT SKT .03-IN-BSC-SZ RND	28480	1251-3172
A6A9U1 (PREFERRED)	5086-7097	6	1	SAMPLER, 2-6.5 GHZ	28480	5086-7097
A6A9U1 (ALTERNATE)	5086-7292	3	1	SAMPLER, 2-6.0 GHZ (ALTERNATE FOR 5086-7097)	28480	5086-7292
				A6A9 MISCELLANEOUS PARTS		
	0340-0667	7	1	INSULATOR MYLAR CLEAR	28480	0340-0667
	1250-1142	5	1	WASHER-RF, CONN, SERIES 3MA, 0250 ID	16179	4151
	1250-1143	6	1	NUT-RF CONN, SERIES 3MA, HEX, 1/4-36 THRD	16179	1707
	2190-0124	4	1	WASHER-LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0138	3	18	SCREW-MACH 4-40 .188-IN-LG 100 DEG	00000	ORDER BY DESCRIPTION
	2200-0148	5	20	SCREW-MACH 4-40 .5-IN-LG 100 DEG	00000	ORDER BY DESCRIPTION
	2950-0078	9	1	NUT-MEX-DBL-CHAM 10-32-THD .067-IN-THK	28480	2950-0078
	85660-00016	0	1	COVER, PHASE LOCK ASSEMBLY	28480	85660-00016
	85660-20063	9	1	COVER, BOTTOM, PHASE LOCK	28480	85660-20063
	85660-20064	0	1	HOUSING	28480	85660-20064
	86701-00054	8	1	SPACER, SAMPLER	28480	86701-00054
A6A9A1	85660-60007	5	1	BOARD ASSEMBLY, PHASE LOCK	28480	85660-60007
A6A9A1C1	0160-3878	6	29	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C2	0160-2261	9	2	CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A6A9A1C3	0160-2254	0	1	CAPACITOR-FXD 7.5PF +-25PF 500VDC CER	28480	0160-2254
A6A9A1C4	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C5	0121-0046	2	3	CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304322 9/35PF N650
A6A9A1C6	0160-2255	1	1	CAPACITOR-FXD 8.2PF +-25PF 500VDC CER	28480	0160-2255
A6A9A1C7	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C8	0160-2236	8	1	CAPACITOR-FXD 1PF +-25PF 500VDC CER	28480	0160-2236
A6A9A1C9	0121-0452	4	1	CAPACITOR-V TRMR-AIR 1.3-5.4PF 250V	74970	187-0103-005
A6A9A1C10	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C11	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C12	0160-3877	5	1	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A6A9A1C13	0121-0046	2		CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304322 9/35PF N650
A6A9A1C14	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C15	0160-0571	0	1	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A6A9A1C16	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C17	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C18	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C19	0160-2261	9		CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A6A9A1C20	0160-2264	2	2	CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A6A9A1C21	0160-2264	2		CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A6A9A1C22	0160-2266	4	1	CAPACITOR-FXD 24PF +-5% 500VDC CER 0+-30	28480	0160-2266
A6A9A1C23	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C24	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C25	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C26	0160-2150	5	2	CAPACITOR-FXD 33PF +-5% 300VDC MICA	28480	0160-2150
A6A9A1C27	0180-2904	9	2	CAPACITOR-FXD .1UF+-10% 75VDC TA	28480	0180-2904
A6A9A1C28	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C29				NOT ASSIGNED		
A6A9A1C30				NOT ASSIGNED		

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A9A1C31	0160-3878	6	1	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C32	0160-2150	5		CAPACITOR-FXD 33PF +-5% 300VDC MICA	28480	0160-2150
A6A9A1C33	0160-2307	4		CAPACITOR-FXD 47PF +-5% 300VDC MICA	28480	0160-2307
A6A9A1C34	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C35	0180-0500	7		CAPACITOR-FXD 47UF +-20% 20VDC TA	04200	196D1114
A6A9A1C36	0160-3878	6	1	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C37				NOT ASSIGNED		
A6A9A1C38				NOT ASSIGNED		
A6A9A1C39				NOT ASSIGNED		
A6A9A1C40		2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A6A9A1C41	0160-3878	6	1	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C42	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C43	0121-0046	2		CAPACITOR-V THMR-CER 9-35PF 200V PC-MTG	52703	304322 9/35PF N650
A6A9A1C44	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C45	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C46	0160-3878	6	1	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C47	0160-0570	9		CAPACITOR-FXD 220PF +-20% 100VDC CER	28480	0160-0570
A6A9A1C48				NOT ASSIGNED		
A6A9A1C49	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C50	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C51	0160-3878	6	1	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C52	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C53	0160-3435	1		CAPACITOR-FXD .047UF +-10% 50VDC POLYE	84411	601PE4739R5w2
A6A9A1C54	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C55	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1C56			1	NOT ASSIGNED		
A6A9A1C57	0180-2205	3		CAPACITOR-FXD .33UF+-10% 35VDC TA	56289	150D334X9035A2
A6A9A1C58	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A6A9A1C59	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A6A9A1C60	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A6A9A1C61	0180-2904	9	6	CAPACITOR-FXD .1UF+-10% 75VDC TA	28480	0180-2904
A6A9A1C62	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A6A9A1CR1	1901-0539	3	2	DIODE-SCHOTTKY	28480	1901-0539
A6A9A1CR2	1901-0539	3		DIODE-SCHOTTKY	28480	1901-0539
A6A9A1CR3	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A9A1CR4	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A9A1CR5	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A9A1CR6			4	NOT ASSIGNED		
A6A9A1CR7	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N3 DO-35	28480	1901-0050
A6A9A1CR8	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N3 DO-35	28480	1901-0050
A6A9A1CR9	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N3 DO-35	28480	1901-0050
A6A9A1CR10	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N3 DO-35	28480	1901-0050
A6A9A1DS1				SEE A6A9DS1		
A6A9A1E1	9170-0029	3	2	CORE-SHIELDING BEAD	28480	9170-0029
A6A9A1E2	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A6A9A1E3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-S2 SQ	28480	1251-0600
A6A9A1E4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-S2 SQ	28480	1251-0600
A6A9A1E5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-S2 SQ	28480	1251-0600
A6A9A1E6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-S2 SQ	28480	1251-0600
A6A9A1J4				SEE A6A9J4		
A6A9A1L1	85660-80012	4	1	COIL, 24 NH	28480	85660-80012
A6A9A1L2	85660-80011	3		COIL, 32 NH	28480	85660-80011
A6A9A1L3	85660-80010	2		COIL, 48 NH	28480	85660-80010
A6A9A1L4				NOT ASSIGNED		
A6A9A1L5	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A6A9A1L6	9100-2251	0	2	COIL-MLD 220NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2251
A6A9A1L7	9140-0158	6		COIL-MLD 1UM 10% Q=32 .095DX,25LG-NOM	28480	9140-0158
A6A9A1L8	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A6A9A1L9	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A6A9A1L10	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A6A9A1L11	9140-0158	6	1	COIL-MLD 1UM 10% Q=32 .095DX,25LG-NOM	28480	9140-0158
A6A9A1L12	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A6A9A1L13	9100-2249	6		COIL-MLD 150NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2249
A6A9A1L14	85660-80010	2		COIL, 48 NH	28480	85660-80010
A6A9A1L15				NOT ASSIGNED		
A6A9A1L16			4	NOT ASSIGNED		
A6A9A1L17				NOT ASSIGNED		
A6A9A1L18				NOT ASSIGNED		
A6A9A1L19				NOT ASSIGNED		
A6A9A1L20	9140-0142	8		COIL-MLD 2.2UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0142
A6A9A1L21	9140-0142	8	1	COIL-MLD 2.2UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0142
A6A9A1L22	9140-0142	8		COIL-MLD 2.2UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0142
A6A9A1L23	9140-0142	8		COIL-MLD 2.2UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0142
A6A9A1L24	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A9A1Q1	1854-0247	9	4	TRANSISTOR NPN SI TO-39 PD=1W FT=800MMZ	28480	1854-0247
A6A9A1Q2	1854-0686	0	2	TRANSISTOR NPN SI TO-72 PD=200MW FT=4GHZ	28480	1854-0686
A6A9A1Q3	1854-0295	7	1	TRANSISTOR-DUAL NPN PD=400MW	28480	1854-0295
A6A9A1Q4	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MMZ	28480	1854-0247
A6A9A1Q5	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MMZ	28480	1854-0247
A6A9A1Q6	1854-0345	8	1	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A6A9A1Q7	1854-0686	0		TRANSISTOR NPN SI TO-72 PD=200MW FT=4GHZ	28480	1854-0686
A6A9A1Q8	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MMZ	28480	1854-0247
A6A9A1Q9	1853-0451	5	5	TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A6A9A1Q10	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A6A9A1Q11	1853-0451	5		TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A6A9A1Q12	1853-0451	5		TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A6A9A1Q13	1854-0248	0	1	TRANSISTOR-DUAL NPN 2N4044 TO-77	28480	1854-0248
A6A9A1Q14	1853-0451	5		TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A6A9A1Q15	1853-0451	5		TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A6A9A1Q16	1854-0475	5	1	TRANSISTOR-DUAL NPN PD=750MW	28480	1854-0475
A6A9A1R1	0698-7188	8	7	RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A6A9A1R2	0757-0401	0	3	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A6A9A1R3	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A6A9A1R4	0698-7248	1	1	RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3-1/8-T0-3161-G
A6A9A1R5	0698-7238	9	1	RESISTOR 1.21K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1211-G
A6A9A1R6	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A6A9A1R7	0698-3441	8	1	RESISTOR 215 1% .125W F TC=0+-100	24546	C4-1/8-T0-215R-G
A6A9A1R8	0698-7245	8	3	RESISTOR 2.37K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2371-G
A6A9A1R9	0698-7246	9	2	RESISTOR 2.61K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2611-G
A6A9A1R10	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A6A9A1R11	0698-7209	4	2	RESISTOR 75 1% .05W F TC=0+-100	24546	C3-1/8-T00-75R0-G
A6A9A1R12	0698-7229	8	3	RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A6A9A1R13	0698-7246	9		RESISTOR 2.61K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2611-G
A6A9A1R14	0698-7245	8		RESISTOR 2.37K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2371-G
A6A9A1R15	0698-7213	0	3	RESISTOR 110 1% .05W F TC=0+-100	24546	C3-1/8-T0-110R-G
A6A9A1R16	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A6A9A1R17	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A6A9A1R18	0698-7205	0	1	RESISTOR 51.1 1% .05W F TC=0+-100	24546	C3-1/8-T00-511R-G
A6A9A1R19	0698-7234	5	1	RESISTOR 825 1% .05W F TC=0+-100	24546	C3-1/8-T0-825R-G
A6A9A1R20	2100-2574	3	1	RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	30983	ET50X501
A6A9A1R21	0698-7213	0		RESISTOR 110 1% .05W F TC=0+-100	24546	C3-1/8-T0-110R-G
A6A9A1R22	0698-7213	0		RESISTOR 110 1% .05W F TC=0+-100	24546	C3-1/8-T0-110R-G
A6A9A1R23				NOT ASSIGNED		
A6A9A1R24				NOT ASSIGNED		
A6A9A1R25	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A6A9A1R26	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A6A9A1R27	0698-7216	3	2	RESISTOR 147 1% .05W F TC=0+-100	24546	C3-1/8-T0-147R-G
A6A9A1R28	0698-7228	7	1	RESISTOR 464 1% .05W F TC=0+-100	24546	C3-1/8-T0-464R-G
A6A9A1R29				NOT ASSIGNED		
A6A9A1R30	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A6A9A1R31				NOT ASSIGNED		
A6A9A1R32				NOT ASSIGNED		
A6A9A1R33				NOT ASSIGNED		
A6A9A1R34				NOT ASSIGNED		
A6A9A1R35	0698-7224	3	2	RESISTOR 316 1% .05W F TC=0+-100	24546	C3-1/8-T0-316R-G
A6A9A1R36	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A6A9A1R37	0698-3445	2	1	RESISTOR 348 1% .125W F TC=0+-100	24546	C4-1/8-T0-348R-F
A6A9A1R38	0698-7203	8	2	RESISTOR 42.2 1% .05W F TC=0+-100	24546	C3-1/8-T00-422R-G
A6A9A1R39	2100-2522	1	1	RESISTOR-TRMR 10K 10% C SIDE-ADJ 1-TRN	30983	ET50X103
A6A9A1R40	0698-7268	5	3	RESISTOR 21.5K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2152-G
A6A9A1R41	0698-7268	5		RESISTOR 21.5K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2152-G
A6A9A1R42	0698-7277	6	3	RESISTOR 51.1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-5112-G
A6A9A1R43	0698-7277	6		RESISTOR 51.1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-5112-G
A6A9A1R44	0698-7284	5	3	RESISTOR 100K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1003-G
A6A9A1R45	0698-7284	5		RESISTOR 100K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1003-G
A6A9A1R46	0698-7209	4		RESISTOR 75 1% .05W F TC=0+-100	24546	C3-1/8-T00-75R0-G
A6A9A1R47	0698-7278	7	1	RESISTOR 56.2K 1% .05W F TC=0+-100	24546	C3-1/8-T0-5622-G
A6A9A1R48	0698-7216	3		RESISTOR 147 1% .05W F TC=0+-100	24546	C3-1/8-T0-147R-G
A6A9A1R49	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A6A9A1R50	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A6A9A1R51	0698-7219	6	1	RESISTOR 196 1% .05W F TC=0+-100	24546	C3-1/8-T0-196R-G
A6A9A1R52	0698-7236	7	1	RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A6A9A1R53				NOT ASSIGNED		
A6A9A1R54	0698-7265	2	2	RESISTOR 16.2K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1622-G
A6A9A1R55	0698-7265	2		RESISTOR 16.2K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1622-G
A6A9A1R56				NOT ASSIGNED		
A6A9A1R57	0698-7260	7	2	RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1002-G
A6A9A1R58				NOT ASSIGNED		
A6A9A1R59				NOT ASSIGNED		
A6A9A1R60	0698-7245	8		RESISTOR 2.37K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2371-G

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A9A1R61	0698-7284	5		RESISTOR 100K 1% .05W F TC=0+-100	24546	C3-1/8-TO-1003-G
A6A9A1R62	0698-7231	2		RESISTOR 619 1% .05W F TC=0+-100	24546	C3-1/8-TO-619R-G
A6A9A1R63	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-TO-1002-G
A6A9A1R64	0698-7268	5		RESISTOR 21.5K 1% .05W F TC=0+-100	24546	C3-1/8-TO-2152-G
A6A9A1R65	0698-7277	6		RESISTOR 51.1K 1% .05W F TC=0+-100	24546	C3-1/8-TO-5112-G
A6A9A1R66	0698-7203	8		RESISTOR 42.2 1% .05W F TC=0+-100	24546	C3-1/8-TO-42R2-G
A6A9A1R67	0698-7257	2	1	RESISTOR 7.5K 1% .05W F TC=0+-100	24546	C3-1/8-TO-7501-G
A6A9A1R68	0698-3441	8	1	RESISTOR 215 1% .125W F TC=0+-100	24546	C4-1/8-TO-215R-F
A6A9A1T1	08552-6044	1	1	TRANSFORMER, RF 5-PIN	28480	08552-6044
A6A9A1U1	1826-0180	0	1	IC TIMER TTL MONO/ASTBL	18324	NES55V
A6A9A1VR1	1902-3301	5	1	DIODE-ZNR 34.8V 5% DO-7 PD=.4W TC=+.078%	28480	1902-3301
				A6A9A1 MISCELLANEOUS PARTS		
	0340-0907	8	2	INSULATOR-XSTR DAP-GL	28480	0340-0907
	1205-0226	9	2	HEAT SINK SGL TO-5/TO-39-PKG	28480	1205-0226
	85660-00017	1	1	RF SHIELD, PHASE LOCK ASSEMBLY	28480	85660-00017

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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A10	85660-60011	1	1	BOARD ASSEMBLY, MISCELLANEOUS BIAS/RELAY DRIVER	28480	85660-60011
A6A10C1	0160-3451	1	3	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A6A10C2	0180-2206	4	1	CAPACITOR-FXD 60UF+-10% 6VDC TA	56289	150D606X900682
A6A10C3	0180-2208	6	1	CAPACITOR-FXD 22UF+-10% 10VDC TA	56289	150D227X901052
A6A10C4	0180-0116	1	2	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X903582
A6A10C5	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A6A10C6				NOT ASSIGNED		
A6A10C7	0160-3879	7	2	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A10C8	0180-0097	7	1	CAPACITOR-FXD 47UF+-10% 35VDC TA	56289	150D476X903582
A6A10C9	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A6A10C10	0180-0228	6	3	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X901582
A6A10C11	0180-0116	1		CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X903582
A6A10C12	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A10C13	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X901582
A6A10C14				NOT ASSIGNED		
A6A10C15	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X901582
A6A10CR1	1901-0050	3	11	DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR2	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR3	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR4	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR5	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR6	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR7	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR8	1901-0535	9	8	DIODE-SCHOTTKY	28480	1901-0535
A6A10CR9	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A10CR10	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR11	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A10CR12	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A10CR13	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A10CR14	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A10CR15				NOT ASSIGNED		
A6A10CR16	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A10CR17	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A6A10CR18	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR19	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A10CR20	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A6A1001	1854-0477	7	9	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A1002	1853-0281	9	3	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A1003	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A1004	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A1005	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A1006	1855-0420	2	4	TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A1007	1855-0420	2		TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A1008	1855-0420	2		TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A1009	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A10010	1855-0420	2		TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A10011	1853-0213	7	1	TRANSISTOR PNP 2N4236 SI TO-5 PD=1W	02037	2N4236
A6A10012	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A10013	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A10014	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A10015	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A10016	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A10017	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A10R1	2100-2574	3	1	RESISTOR-TRMR 500 10% C SIDE-ADJ 1-TRN	30983	ET50X501
A6A10R2	0757-0442	9	16	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R3	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R4	0757-0458	9	3	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5112-F
A6A10R5	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R6	0757-0346	2	5	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A10R7	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R8	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R9	2100-3154	7	4	RESISTOR-TRMR 1K 10% C SIDE-ADJ 17-TRN	02111	43P102
A6A10R10	0698-7281	2	4	RESISTOR 75K 2% .05W F TC=0+-100	24546	C3=1/8-T0=7502-G
A6A10R11	0699-0127	3	4	RESISTOR 464K 1% .05W F TC=0+-100	28480	0699-0127
A6A10R12	2100-3154	7		RESISTOR-TRMR 1K 10% C SIDE-ADJ 17-TRN	02111	43P102
A6A10R13	0698-7281	2		RESISTOR 75K 2% .05W F TC=0+-100	24546	C3=1/8-T0=7502-G
A6A10R14	0699-0127	3		RESISTOR 464K 1% .05W F TC=0+-100	28480	0699-0127
A6A10R15	2100-3154	7		RESISTOR-TRMR 1K 10% C SIDE-ADJ 17-TRN	02111	43P102
A6A10R16	0698-7281	2		RESISTOR 75K 2% .05W F TC=0+-100	24546	C3=1/8-T0=7502-G
A6A10R17	0699-0127	3		RESISTOR 464K 1% .05W F TC=0+-100	28480	0699-0127
A6A10R18	2100-3154	7		RESISTOR-TRMR 1K 10% C SIDE-ADJ 17-TRN	02111	43P102
A6A10R19	0698-7281	2		RESISTOR 75K 2% .05W F TC=0+-100	24546	C3=1/8-T0=7502-G
A6A10R20	0699-0127	3		RESISTOR 464K 1% .05W F TC=0+-100	28480	0699-0127

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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A10R21	2100-3054	6	5	RESISTOR-TRMR 50K 10% C SIDE-ADJ 17-TRN	02111	43P503
A6A10R22	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R23	2100-3054	6		RESISTOR-TRMR 50K 10% C SIDE-ADJ 17-TRN	02111	43P503
A6A10R24	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R25	2100-3054	6		RESISTOR-TRMR 50K 10% C SIDE-ADJ 17-TRN	02111	43P503
A6A10R26	0757-0442	9	6	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R27	2100-3054	6		RESISTOR-TRMR 50K 10% C SIDE-ADJ 17-TRN	02111	43P503
A6A10R28	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R29	2100-3054	6		RESISTOR-TRMR 50K 10% C SIDE-ADJ 17-TRN	02111	43P503
A6A10R30	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R31	2100-1661	7	8	RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10R32	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A6A10R33	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A6A10R34	2100-1661	7		RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10R35	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A6A10R36	0698-3260	9	7	RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A6A10R37	2100-1661	7		RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10R38	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A6A10R39	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A6A10R40	2100-1661	7		RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10R41	2100-1661	7	7	RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10R42	2100-1661	7		RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10R43	0757-0458	7		RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5112-F
A6A10R44	0757-0316	6		RESISTOR 42.2 1% .125W F TC=0+-100	24546	C4=1/8-T0=42R2-F
A6A10R45	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A6A10R46	0757-0458	7	1	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5112-F
A6A10R47	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4=1/8-T0=8251-F
A6A10R48	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A6A10R49	0757-0278	9		RESISTOR 1.78K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1781-F
A6A10R50	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R51	0757-0442	9	9	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R52	0757-1078	9		RESISTOR 1.47K 1% .5W F TC=0+-100	28480	0757-1078
A6A10R53	0698-7212	9		RESISTOR 100 1% .05W F TC=0+-100	24546	C3=1/8-T0=100R-G
A6A10R54	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R55				NOT ASSIGNED		
A6A10R56	0757-0401	0	2	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A6A10R57	0698-7238	9		RESISTOR 1.21K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1211-G
A6A10R58	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R59	0698-3454	3		RESISTOR 215K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2153-F
A6A10R60	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A6A10R61	0698-7243	6	2	RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1961-G
A6A10R62	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A10R63	0698-7212	9		RESISTOR 100 1% .05W F TC=0+-100	24546	C3=1/8-T0=100R-G
A6A10R64	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1961-G
A6A10R65	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A10R66	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A10R67	0757-0398	4		RESISTOR 75 1% .125W F TC=0+-100	24546	C4=1/8-T0=75R0-F
A6A10R68	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A10R69	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A6A10R70	2100-1661	7		RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10R71	0698-3260	9	7	RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A6A10R72	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A6A10R73	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R74	0698-7238	9		RESISTOR 1.21K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1211-G
A6A10R75	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A10R76	2100-1661	7	8	RESISTOR-TRMR 20K 5% WW SIDE-ADJ 22-TRN	32997	3057P=1-203
A6A10TP1	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10TP6	1251-0600	0	0	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A6A10U1	1820-1538	2	1	IC GATE CMOS NAND QUAD 2-INP	01928	CD4011AF
A6A10U2	1826-0261	8		IC 741 OP AMP TO-99	28480	1826-0261
A6A10U3	1820-1542	8		IC BFR CMOS INV HEX 1-INP	01928	CD4049AF
A6A10U4	1858-0047	5		TRANSISTOR ARRAY DA-PIN	13606	ULN=2003A
A6A10U5	1858-0047	5		TRANSISTOR ARRAY DA-PIN	13606	ULN=2003A
A6A10U6	1810-0206	8	1	NETWORK-RES 8-PIN-SIP .1-PIN-8PCG	11236	750-81-R10K
A6A10U7	1826-0161	7		IC 324 OP AMP 14-DIP-P	18324	LM324-A
A6A10VR1	1902-3323	1	4	DIODE-ZNR 42.2V 5% DO-7 PD=.4W TC=+.08%	28480	1902-3323
A6A10VR2	1902-3301	5		DIODE-ZNR 34.8V 5% DO-7 PD=.4W TC=+.078%	28480	1902-3301
A6A10VR3	1902-3301	5		DIODE-ZNR 34.8V 5% DO-7 PD=.4W TC=+.078%	28480	1902-3301
A6A10VR4	1902-3301	5		DIODE-ZNR 34.8V 5% DO-7 PD=.4W TC=+.078%	28480	1902-3301
A6A10VR5	1902-3301	5		DIODE-ZNR 34.8V 5% DO-7 PD=.4W TC=+.078%	28480	1902-3301

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A10VR6	1902-3203	6	1	DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
				A6A10 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0748	3	1	EXTRACTOR-PC BOARD BLK POLYC	28480	4040-0748
	4040-0749	4	1	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A11	85600-00012	2	1	BOARD ASSEMBLY, SLOPE GENERATOR	28480	85600-00012
A6A11C1	0180-0116	1	3	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A6A11C2	0180-3877	5	1	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0180-3877
A6A11C3	0180-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X9010B2
A6A11C4	0180-0116	1		CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A6A11C5	0180-1746	5	1	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A6A11C6	0180-0116	1		CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A6A11CR1	1901-1067	4	16	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR2	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR3	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR4	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR5	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR6	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR7	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR8	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR9	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR10	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR11	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR12	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR13	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR14	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR15	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11CR16	1901-1067	4		DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A11Q1	1855-0414	4	10	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q2	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q3	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q4	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q5	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q6	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q7	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q8	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q9	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q10	1855-0414	4		TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A11Q11	1854-0477	7	6	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A11Q12	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A11Q13	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A11Q14	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A11Q15	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A11Q16	1854-0637	1	1	TRANSISTOR NPN 2N2219A SI TO-5 PD=800MW	28480	1854-0637
A6A11Q17	1853-0281	9	3	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A11Q18	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A11Q19	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A11Q20	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A11R1	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0-7501-F
AGA11R2*	0757-0447	8	1	RESISTOR 121K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1213-F
A6A11R3	0757-0465	6	22	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R4	0698-3260	9	2	RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A6A11R5	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R6	0757-0199	3	1	RESISTOR 21.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2152-F
A6A11R7	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R8	0757-0290	5	2	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A6A11R9	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R10	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2371-F
A6A11R11	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R12	0757-0442	9	13	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A6A11R13	0757-0123	3	1	RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A6A11R14	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2151-F
A6A11R15	0757-0280	3	7	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1001-F
A6A11R16	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1471-F
A6A11R17	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1001-F
A6A11R18	0757-0416	7	4	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A6A11R19	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A6A11R20	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0-511R-F
A6A11R21	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R22	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R23	0698-3260	9		RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A6A11R24-				NOT ASSIGNED		
A6A11R35						
A6A11R36	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R37	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R38	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R39	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A6A11R40	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F

See introduction to this section for ordering information

*Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A11R41	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R42	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R43	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R44	0698-0065	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A6A11R45	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R46	0757-0442	9	10	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R47	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R48	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R49	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R50	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R51	2100-3353	8	10	RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R52	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R53	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R54	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R55	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R56	0757-0465	6	10	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R57	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R58	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R59	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R60	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R61	0683-3955	8	10	RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R62	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R63	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R64	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R65	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R66	2100-3353	8	10	RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R67	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R68	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R69	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R70	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R71	0757-0465	6	10	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R72	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R73	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R74	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R75	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R76	0683-3955	8	10	RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R77	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R78	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE=ADJ 1-TRN	32997	3386X-Y46=203
A6A11R79	0683-3955	8		RESISTOR 3.9M 5% .25W FC TC=900/+1100	01121	CB3955
A6A11R80	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R81	0698-3136	8	2	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1782-F
A6A11R82	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1782-F
A6A11R83	0698-3159	5		RESISTOR 26.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2612-F
A6A11R84	2100-3273	1		RESISTOR-TRMR 2K 10% C SIDE=ADJ 1-TRN	28480	2100-3273
A6A11R85	0698-3156	2		RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1472-F
A6A11R86	0757-0280	3	3	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A6A11R87				NOT ASSIGNED		
A6A11R88	0698-3156	2		RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1472-F
A6A11R89	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R90	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A6A11R91	0757-0416	7	3	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A6A11R92	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A6A11R93	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A6A11R94	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A6A11R95	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A6A11R96	0757-0280	3	4	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A6A11R97	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003-F
A6A11R98	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A6A11R99	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A6A11R100	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A6A11R101	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A6A11R102	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A6A11R103	0757-0463	4		RESISTOR 82.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0=8252-F
A6A11R104	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A6A11R105	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A6A11R106	0757-0200	7	1	RESISTOR 5.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5621-F
A6A11R107	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A11R108	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A11R109	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A11R110	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A6A11TP1	1251-0600	0	8	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A6A11TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A6A11TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A6A11TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A6A11TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A11TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A6A11TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A6A11TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A6A11U1	1826-0261	8	2	IC 741 OP AMP TO-99	28480	1826-0261
A6A11U2	1826-0092	3	3	IC OP AMP TO-99	28480	1826-0092
A6A11U3	1820-1281	2	1	IC ODR TTL LS 2-TO-4-LINE DUAL 2-INP	01295	SN74LS139N
A6A11U4	1826-0092	3		IC OP AMP TO-99	28480	1826-0092
A6A11U5	1826-0161	7	1	IC 324 OP AMP 14-DIP-P	18324	LM324-A
A6A11U6	1826-0092	3		IC OP AMP TO-99	28480	1826-0092
A6A11U7	1826-0261	8		IC 741 OP AMP TO-99	28480	1826-0261
A6A11U8	1820-1195	7	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A6A11U9	1820-1196	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A6A11U10	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A6A11U11	1826-0188	8	1	IC 1408 CONV 16-DIP-C	04713	MC1408L-8
A6A11VR1	1902-0625	0	1	DIODE-ZNR 1N829 6.2V 5% DO-7 PD=.25W	04713	1N829
A6A11VR2	1902-0041	4	1	DIODE-ZNR 5.1V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
A6A11VR3	1902-3203	6	1	DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
A6A11VR4	1902-0025	4	1	DIODE-ZNR 10V 5% DO-7 PD=.4W TC=+.06%	28480	1902-0025
				A6A11 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0749	4	2	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749

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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A12	85660-60013	3	1	BOARD ASSEMBLY, VIG-TUNED MIXER(YTX) DRIVER	28480	85660-60013
A6A12C1*	0180-0218	4	2	CAPACITOR-FXD .15UF+-10% 35VDC TA	56289	150D154X9035A2
A6A12C2*	0180-0218	4	4	CAPACITOR-FXD .15UF+-10% 35VDC TA	56289	150D154X9035A2
A6A12C3	0180-0373	2	1	CAPACITOR-FXD .68UF+-10% 35VDC TA	56289	150D684X9035A2
A6A12C4	0160-0571	0	4	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A6A12C5	0160-0571	0	0	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A6A12C6	0180-0197	8	3	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A6A12C7	0160-3097	1	4	CAPACITOR-FXD .47UF +80-20% 50VDC CER	28480	0160-3097
A6A12C8	0160-3879	7	1	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A12C9	0160-3097	1	8	CAPACITOR-FXD .47UF +80-20% 50VDC CER	28480	0160-3097
A6A12C10	0180-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A6A12C11	0180-1743	2	1	CAPACITOR-FXD .1UF+-10% 35VDC TA	56289	150D104X9035A2
A6A12C12	0160-0571	0	0	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A6A12C13	0160-0571	0	0	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A6A12C14	0180-0197	8	0	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A6A12C15	0160-3097	1	1	CAPACITOR-FXD .47UF +80-20% 50VDC CER	28480	0160-3097
A6A12C16	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A6A12C17	0160-3097	1	0	CAPACITOR-FXD .47UF +80-20% 50VDC CER	28480	0160-3097
A6A12C18	0180-0229	7	2	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A6A12C19	0180-0116	1	2	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A6A12C20	0180-1746	5	1	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A6A12C21	0160-0116	1	0	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A6A12C22	0180-0229	7	0	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A6A12C23	0180-0376	5	1	CAPACITOR-FXD .47UF+-10% 35VDC TA	56289	150D474X9035A2
A6A12CR1	1901-1067	4	17	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR2	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR3	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR4	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR5	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR6	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR7	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR8	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR9	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR10	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR11	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR12	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR13	1901-1067	4	0	NOT ASSIGNED	07263	FDH444
A6A12CR14	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR15	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR16	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR17	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12CR18	1901-1067	4	0	DIODE-SWITCHING 125V 175MA 60NS DO-35	07263	FDH444
A6A12J1	1250-0543	8	2	CONNECTOR-RF 5M-SNP M PC 50-OHM	28480	1250-0543
A6A12J2	1250-0543	8	0	CONNECTOR-RF 5M-SNP M PC 50-OHM	28480	1250-0543
A6A12Q1	1855-0414	4	8	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q2	1855-0414	4	0	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q3	1855-0414	4	0	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q4	1855-0420	2	4	TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A12Q5	1855-0420	2	0	TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A12Q6	1855-0420	2	0	TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A12Q7	1855-0414	4	0	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q8	1855-0414	4	0	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q9	1855-0414	4	0	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q10	1855-0414	4	0	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q11	1853-0281	9	1	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A6A12Q12	1855-0414	4	0	TRANSISTOR J-FET 2N4393 N-CHAN D-MODE	17856	2N4393
A6A12Q13	1854-0557	4	2	TRANSISTOR NPN 2N2432A SI TO-18 PD=300MW	01295	2N2432A
A6A12Q14	1854-0557	4	0	TRANSISTOR NPN 2N2432A SI TO-18 PD=300MW	01295	2N2432A
A6A12Q15	1855-0420	2	0	TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A6A12Q16	1854-0637	1	1	TRANSISTOR NPN 2N2219A SI TO-5 PD=800MW	28480	1854-0637
A6A12Q17	1853-0322	9	0	TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01598	2N2946A
A6A12Q18	1854-0477	7	2	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A12Q19	1854-0477	7	0	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A6A12R1	0698-8067	4	6	RESISTOR 5K .01% .15W F TC=0+-1	28480	0698-8067
A6A12R2	0698-8067	4	0	RESISTOR 5K .01% .15W F TC=0+-1	28480	0698-8067
A6A12R3	0698-8067	4	0	RESISTOR 5K .01% .15W F TC=0+-1	28480	0698-8067
A6A12R4	0698-8067	4	0	RESISTOR 5K .01% .15W F TC=0+-1	28480	0698-8067
A6A12R5	0699-0153	5	1	RESISTOR 2K .1% .225W F TC=0+-1	28480	0699-0153
A6A12R6	0698-3153	9	1	RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3831-F
A6A12R7	0698-8625	0	7	RESISTOR 1K .1% .1W F TC=0+-5	28480	0698-8625
A6A12R8	0698-8625	0	0	RESISTOR 1K .1% .1W F TC=0+-5	28480	0698-8625
A6A12R9	0698-8625	0	0	RESISTOR 1K .1% .1W F TC=0+-5	28480	0698-8625
A6A12R10	0698-8625	0	0	RESISTOR 1K .1% .1W F TC=0+-5	28480	0698-8625

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A12R11	0698-0083	8	7	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1961-F
A6A12R12	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1961-F
A6A12R13	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1961-F
A6A12R14	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1961-F
A6A12R15	0698-3453	2	11	RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1963-F
A6A12R16	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1963-F
A6A12R17	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1963-F
A6A12R18	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1963-F
A6A12R19	0757-0280	3	12	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R20	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R21	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R22	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R23	0757-0442	9	12	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R24	2100-3353	8	2	RESISTOR-TRMR 20K 10% C SIDE-ADJ 1-TRN	32997	3057P-1=203
A6A12R25	2100-3353	8		RESISTOR-TRMR 20K 10% C SIDE-ADJ 1-TRN	32997	3057P-1=203
A6A12R26	2100-3357	2	1	RESISTOR-TRMR 500K 10% C SIDE-ADJ 1-TRN	28480	2100-3357
A6A12R27	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1963-F
A6A12R28	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1963-F
A6A12R29	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1963-F
A6A12R30	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R31	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R32	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R33	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R34	0757-0465	6	6	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1003-F
A6A12R35	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1003-F
A6A12R36	0698-3157	3	4	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1962-F
A6A12R37	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1962-F
A6A12R38	0698-4037	0	6	RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-TO-46R4-F
A6A12R39	0698-4037	0		RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-TO-46R4-F
A6A12R40	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-TO-101-F
A6A12R41	0698-4037	0		RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-TO-46R4-F
A6A12R42	0698-4037	0		RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-TO-46R4-F
A6A12R43	0698-8827	4	2	RESISTOR 1M 1% .125W F TC=0+-100	28480	0698-8827
A6A12R44	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1961-F
A6A12R45	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-TO-101-F
A6A12R46	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1003-F
A6A12R47	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R48	0698-8625	0		RESISTOR 1K .1% .1M F TC=0+-5	28480	0698-8625
A6A12R49	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R50	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1003-F
A6A12R51	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1001-F
A6A12R52	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R53				NOT ASSIGNED		
A6A12R54	0698-7479	0	4	RESISTOR 10K .1% .225W F TC=0+-1	28480	0698-7479
A6A12R55	0698-7479	0		RESISTOR 10K .1% .225W F TC=0+-1	28480	0698-7479
A6A12R56	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1962-F
A6A12R57	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1962-F
A6A12R58	0698-0082	7	1	RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-TO-4640-F
A6A12R59	0698-4037	0		RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-TO-46R4-F
A6A12R60	0698-4037	0		RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-TO-46R4-F
A6A12R61	0698-8625	0		RESISTOR 1K .1% .1M F TC=0+-5	28480	0698-8625
A6A12R62	0698-8827	4		RESISTOR 1M 1% .125W F TC=0+-100	28480	0698-8827
A6A12R63	2100-2039	5	3	RESISTOR-TRMR 20K 5% WH SIDE-ADJ 10-TRN	28480	2100-2039
A6A12R64	0698-7479	0		RESISTOR 10K .1% .225W F TC=0+-1	28480	0698-7479
A6A12R65	0698-8485	0	3	RESISTOR 6.69K .1% .1M F TC=0+-4	28480	0698-8485
A6A12R66	2100-2039	5		RESISTOR-TRMR 20K 5% WH SIDE-ADJ 10-TRN	28480	2100-2039
A6A12R67	0698-8625	0		RESISTOR 1K .1% .1M F TC=0+-5	28480	0698-8625
A6A12R68	0698-8485	0		RESISTOR 6.69K .1% .1M F TC=0+-4	28480	0698-8485
A6A12R69	0698-6407	2	1	RESISTOR 32.8K .1% .1M F TC=0+-4	28480	0698-6407
A6A12R70	0698-3158	4	1	RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4-1/8-TO-2372-F
A6A12R71	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R72	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R73	0698-3151	7		RESISTOR 2.87K 1% .125W F TC=0+-100	24546	C4-1/8-TO-2871-F
A6A12R74	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R75	0698-8161	9	1	RESISTOR 20K 1% .1M F TC=0+-5	28480	0698-8161
A6A12R76	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1002-F
A6A12R77	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1003-F
A6A12R78	0698-3161	9	4	RESISTOR 38.3K 1% .125W F TC=0+-100	24546	C4-1/8-TO-3832-F
A6A12R79	0698-3161	9		RESISTOR 38.3K 1% .125W F TC=0+-100	24546	C4-1/8-TO-3832-F
A6A12R80	0698-3161	9		RESISTOR 38.3K 1% .125W F TC=0+-100	24546	C4-1/8-TO-3832-F
A6A12R81	0698-3161	9		RESISTOR 38.3K 1% .125W F TC=0+-100	24546	C4-1/8-TO-3832-F
A6A12R82	2100-1661	7	4	RESISTOR-TRMR 20K 5% WH SIDE-ADJ 22-TRN	32997	3057P-1=203
A6A12R83	2100-1661	7		RESISTOR-TRMR 20K 5% WH SIDE-ADJ 22-TRN	32997	3057P-1=203
A6A12R84	2100-1661	7		RESISTOR-TRMR 20K 5% WH SIDE-ADJ 22-TRN	32997	3057P-1=203
A6A12R85	2100-1661	7		RESISTOR-TRMR 20K 5% WH SIDE-ADJ 22-TRN	32997	3057P-1=203

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A12R86	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1963-F
A6A12R87	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1963-F
A6A12R88	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1963-F
A6A12R89	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1963-F
A6A12R90	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A6A12R91	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A6A12R92	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A6A12R93	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A6A12R94	0757-0465	6		RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A6A12R95	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A6A12R96	0698-3156	2		RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1472-F
A6A12R97	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1212-F
A6A12R98	2100-3390	3	1	RESISTOR-TRMR 1K 10% MF SIDE-ADJ 25-TRN	18612	1202-Y-1K
A6A12R99	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A6A12R100	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A6A12R101	0757-0458	7	1	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A6A12R102	0757-0289	2	1	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A6A12R103	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A6A12R104	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A6A12R105	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A6A12R106	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A6A12R107	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A6A12R108	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A6A12R109	0698-7479	0		RESISTOR 10K 1% .225W F TC=0+-1	28480	0698-7479
A6A12R110	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A6A12R111	0757-0438	3	2	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A6A12R112	0698-8485	5		RESISTOR 6.49K 1% .1W F TC=0+-4	28480	0698-8485
A6A12R113	2100-2039	5		RESISTOR-TRMR 20K 5% HW SIDE-ADJ 10-TRN	28480	2100-2039
A6A12R114	0698-8067	4		RESISTOR 5K .01% .15W F TC=0+-1	28480	0698-8067
A6A12R115	0698-8067	4		RESISTOR 5K .01% .15W F TC=0+-1	28480	0698-8067
A6A12R116	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A6A12R117	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A6A12R118	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A6A12TP1	1251-0600	0	6	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z SQ	28480	1251-0600
A6A12TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z SQ	28480	1251-0600
A6A12TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z SQ	28480	1251-0600
A6A12TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z SQ	28480	1251-0600
A6A12TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z SQ	28480	1251-0600
A6A12TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z SQ	28480	1251-0600
A6A12U1	1826-0092	3	4	IC OP AMP T0-99	28480	1826-0092
A6A12U2	1826-0092	3		IC OP AMP T0-99	28480	1826-0092
A6A12U3	1826-0162	8	2	IC PREAMPLIFIER T0-99	27014	LM321H
A6A12U4	1826-0092	3		IC OP AMP T0-99	28480	1826-0092
A6A12U5	1826-0162	8		IC PREAMPLIFIER T0-99	27014	LM321H
A6A12U6	1826-0371	1	1	IC OP AMP T0-99	27014	LF256H
A6A12U7	1826-0092	3		IC OP AMP T0-99	28480	1826-0092
A6A12U8	1826-0261	8	1	IC 741 OP AMP T0-99	28480	1826-0261
A6A12VR1	1902-3203	6	2	DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
A6A12VR2				NOT ASSIGNED		
A6A12VR3	1902-0025	4	1	DIODE-ZNR 10V 5% DO-7 PD=.4W TC=+.06%	28480	1902-0025
A6A12VR4	1902-3203	6		DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
A6A12VR5	1902-0625	0	1	DIODE-ZNR 1N829 6.2V 5% DO-7 PD=.25W	04713	1N829
				A6A12 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0749	4	1	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749
	4040-0750	7	1	EXTRACTOR-PC BOARD RED POLYC	28480	4040-0750

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A6A13	85660-60014	4	1	BOARD ASSEMBLY, RF MODULE MOTHERBOARD	28480	85660-60014
A6A13C1	0180-2216	6	1	CAPACITOR-FXD 350UF+75-10% 16VDC AL	56289	300357G016DM2
A6A13C2	0180-1997	8	1	CAPACITOR-FXD 20UF+50-10% 150VDC AL	28480	0180-1997
A6A13C3	0180-2144	9	1	CAPACITOR-FXD 200UF+75-10% 25VDC AL	56289	300207G025DM9
A6A13C4	0180-1819	3	1	CAPACITOR-FXD 100UF+75-10% 50VDC AL	56289	300107G050DM2
A6A13C5	0160-3879	7	1	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A6A13C6	0180-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	1500336X901082
A6A13C7	0180-0141	2	1	CAPACITOR-FXD 50UF+75-10% 50VDC AL	56289	300506G050DD2
A6A13J1	1251-5550	9	1	CONNECTOR 50-PIN M	28480	1251-5550
A6A13J2	1251-5144	7	1	CONNECTOR 14-PIN M POST TYPE	28480	1251-5144
A6A13J3	1251-5549	6	1	CONNECTOR 50-PIN M	28480	1251-5549
A6A13J4	1251-5145	8	1	CONNECTOR 12-PIN M POST TYPE	28480	1251-5145
A6A13J5	1200-0508	0	1	SOCKET-IC 14-CONT DIP-SLDR	28480	1200-0508
A6A13L1	08558-80011	6	5	FILTER, COIL, BLUE	28480	08558-80011
A6A13L2	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A6A13L3	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A6A13L4	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A6A13L5	9140-0144	0	1	COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A6A13L6	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A6A13R1	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A6A13VR1	1902-0049	2	1	DIODE-ZNR 6.19V 5% DD-7 PD=.4W TC=+.022%	28480	1902-0049
A6A13XA1				NOT ASSIGNED		
A6A13XA2				NOT ASSIGNED		
A6A13XA3	1251-2035	9	4	CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A6A13XA4				NOT ASSIGNED		
A6A13XA5				NOT ASSIGNED		
A6A13XA6	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A6A13XA7				NOT ASSIGNED		
A6A13XA8				NOT ASSIGNED		
A6A13XA9	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A6A13XA10	1251-1365	6	2	CONNECTOR-PC EDGE 22-CONT/ROW 2-ROWS	28480	1251-1365
A6A13XA11	1251-1365	6		CONNECTOR-PC EDGE 22-CONT/ROW 2-ROWS	28480	1251-1365
A6A13XA12	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035
A6A14	5086-7261	6	1	LIMITER, 0-2.5 GHz	28480	5086-7261
A6A15	9135-0067	5	1	BANDPASS FILTER, 3.6 GHz, SMA CONNECTORS	28480	9135-0067
A6A16	5086-7299	0	1	LOW PASS FILTER, 1.5 GHz	28480	5086-7299
A6A17	0955-0117	5	1	BANDPASS FILTER, 300 MHz	28480	0955-0117
A6A18	9135-0108	5	1	FILTER, LOW PASS, 26 GHz	28480	9135-0108

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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7				M/N REFERENCE		
A7A1	85660-60015	5	1	BOARD ASSEMBLY, REFERENCE PHASE DETECTOR	28480	85660-60015
A7A1C1	0180-0197	8	6	CAPACITOR-FXD 2,2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A1C2	0180-0197	8		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A1C3	0180-1746	5	4	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A7A1C4	0160-3879	7	6	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A7A1C5	0140-0190	7	1	CAPACITOR-FXD 39PF +-5% 300VDC MICA	72136	DM15E390J0300HV1CR
A7A1C6	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A7A1C7	0160-2055	9	24	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C8	0180-0197	8		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A1C9	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A7A1C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C11	0180-0197	8		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A1C12	0160-2199	2	1	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A7A1C13	0180-0197	8		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A1C14	0160-2204	0	3	CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A7A1C15	0180-0197	8		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A1C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C18	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C19	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C22	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C23	0180-0553	0	2	CAPACITOR-FXD 22UF+-20% 25VDC TA	28480	0180-0553
A7A1C24	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C25	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C26	0160-2204	0		CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A7A1C27	0140-0193	0	4	CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300HV1CR
A7A1C28	0180-0553	0		CAPACITOR-FXD 22UF+-20% 25VDC TA	28480	0180-0553
A7A1C29	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C30	0140-0193	0		CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300HV1CR
A7A1C31	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A7A1C32	0170-0066	9	1	CAPACITOR-FXD .027UF +-10% 200VDC POLYE	28480	0170-0066
A7A1C33	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C34	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C35	0140-0193	0		CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300HV1CR
A7A1C36	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C37	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C38	0140-0193	0		CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300HV1CR
A7A1C39	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A7A1C40	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A7A1C41	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C42	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C43	0160-2206	2	1	CAPACITOR-FXD 160PF +-5% 300VDC MICA	28480	0160-2206
A7A1C44	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C45	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C46	0140-0210	2	3	CAPACITOR-FXD 270PF +-5% 300VDC MICA	72136	DM15F271J0300HV1CR
A7A1C47	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C48	0140-0210	2		CAPACITOR-FXD 270PF +-5% 300VDC MICA	72136	DM15F271J0300HV1CR
A7A1C49	0160-2201	7	1	CAPACITOR-FXD 51PF +-5% 300VDC MICA	28480	0160-2201
A7A1C50	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C51	0140-0210	2		CAPACITOR-FXD 270PF +-5% 300VDC MICA	72136	DM15F271J0300HV1CR
A7A1C52	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C53	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A7A1C54	0180-0183	2	1	CAPACITOR-FXD 10UF+75-10% 50VDC AL	56289	30D106G050C82
A7A1C55	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A7A1C56	0180-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X9010B2
A7A1C57	0160-2204	0		CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A7A1C58	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A7A1C59	0160-3878	6	2	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A1C60	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A1C61	0160-3454	4	1	CAPACITOR-FXD 220PF +/-10% 1KVDC CER	28480	0160-3454
A7A1C62	0160-3878	6		CAPACITOR-FXD 1000PF +/-20% 100VDC CER	28480	0160-3878
A7A1CR1	1901-0518	8	6	DIODE-SCHOTTKY	28480	1901-0518
A7A1CR2	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A7A1CR3	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A7A1CR4	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A7A1CR5	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A7A1CR6	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A7A1J1	1250-0544	9	5	CONNECTOR-RF 3M-SNP M SGL-HOLE-FR 50-OHM	28480	1250-0544
A7A1J2				P/O A7A1W1		
A7A1J3	1250-0544	9		CONNECTOR-RF 3M-SNP M SGL-HOLE-FR 50-OHM	28480	1250-0544
A7A1J4	1250-0544	9		CONNECTOR-RF 3M-SNP M SGL-HOLE-FR 50-OHM	28480	1250-0544
A7A1J5	1250-0544	9		CONNECTOR-RF 3M-SNP M SGL-HOLE-FR 50-OHM	28480	1250-0544
A7A1J6	1250-0544	9		CONNECTOR-RF 3M-SNP M SGL-HOLE-FR 50-OHM	28480	1250-0544
A7A1L1	9140-0238	3	2	COIL-MLD 82UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0238
A7A1L2	9140-0238	3		COIL-MLD 82UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0238
A7A1L3	9140-0143	9	2	COIL-MLD 3.3UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0143
A7A1L4	9140-0143	9		COIL-MLD 3.3UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0143
A7A1L5	9100-2261	2	1	COIL-MLD 2.7UH 10% Q=40 .095DX,25LG-NOM	28480	9100-2261
A7A1L6	9140-0114	4	1	COIL-MLD 10UH 10% Q=55 .155DX,375LG-NOM	28480	9140-0114
A7A1L7	9100-2255	4	4	COIL-MLD 470NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2255
A7A1L8	9100-0368	6	1	COIL-MLD 330NH 10% Q=28 .095DX,25LG-NOM	28480	9100-0368
A7A1L9	9100-2257	6	3	COIL-MLD 820NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2257
A7A1L10	9100-2255	4		COIL-MLD 470NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2255
A7A1L11	9100-2257	6		COIL-MLD 820NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2257
A7A1L12	9100-2255	4		COIL-MLD 470NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2255
A7A1L13	9100-2257	6		COIL-MLD 820NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2257
A7A1L14	9100-2255	4		COIL-MLD 470NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2255
A7A1L15	9100-2256	5	1	COIL-MLD 560NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2256
A7A1L16	9100-2891	4	1	COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A1Q1	1854-0019	3	3	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A7A1Q2	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A7A1Q3	1854-0019	3		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0019
A7A1Q4	1855-0049	1	1	TRANSISTOR-JFET DUAL N-CHAN D-MODE SI	28480	1855-0049
A7A1Q5	1853-0451	5	2	TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A7A1Q6	1853-0451	5		TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A7A1Q7	1853-0034	0	1	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0034
A7A1R1	0757-0399	5	2	RESISTOR 82.5 1% .125W F TC=0+-100	24546	C4-1/8-T0=82R5-F
A7A1R2	0757-0417	8	1	RESISTOR 562 1% .125W F TC=0+-100	24546	C4-1/8-T0=562R-F
A7A1R3	0757-0416	7	4	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A7A1R4	0757-0401	0	3	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A7A1R5	0698-3156	2	1	RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1472-F
A7A1R6	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A7A1R7	0757-0420	3	1	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0=751-F
A7A1R8	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A7A1R9	0757-0399	5		RESISTOR 82.5 1% .125W F TC=0+-100	24546	C4-1/8-T0=82R5-F
A7A1R10	0698-7222	1	1	RESISTOR 261 1% .05W F TC=0+-100	24546	C3-1/8-T0=261R-G
A7A1R11	0698-7219	6	1	RESISTOR 196 1% .05W F TC=0+-100	24546	C3-1/8-T0=196R-G
A7A1R12	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A7A1R13	0698-3453	2	3	RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1963-F
A7A1R14	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A7A1R15	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1963-F
A7A1R16	0757-0441	8	2	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0=8251-F
A7A1R17	0698-3438	3	2	RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0=147R-F
A7A1R18	0757-0346	2	6	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A7A1R19	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A7A1R20	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0=8251-F
A7A1R21	0698-3438	3		RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0=147R-F
A7A1R22	0698-3136	8	1	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1782-F
A7A1R23	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A7A1R24	0698-3154	0	5	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A1R25	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A7A1R26	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A7A1R27	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A1R28	0698-3450	9	1	RESISTOR 42.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4222-F
A7A1R29	0698-3449	6	1	RESISTOR 28.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2872-F
A7A1R30	0757-0444	1	2	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1212-F
A7A1R31	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A1R32	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A7A1R33	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A1R34	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0=10R0-F
A7A1R35	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A1R36	0757-0444	1		RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1212-F
A7A1R37	0757-0200	7	1	RESISTOR 5.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5621-F
A7A1R38	0757-0421	4	2	RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0=825R-F
A7A1R39	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0=7501-F
A7A1R40	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A7A1R41	0698-3446	3	2	RESISTOR 383 1% .125W F TC=0+-100	24546	C4=1/8-T0=383R-F
A7A1R42	0698-0085	0	3	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A7A1R43	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A7A1R44	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A7A1R45	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A7A1R46	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4221-F
A7A1R47	0698-3453	2		RESISTOR 196K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1963-F
A7A1R48	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A7A1R49	0698-7285	6	1	RESISTOR 110K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1103-G
A7A1R50	0698-3157	3	2	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A7A1R51	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A7A1R52	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A7A1R53	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196R-F
A7A1R54	0698-7234	5	1	RESISTOR 825 1% .05W F TC=0+-100	24546	C3=1/8-T0=825R-G
A7A1R55	0698-7257	2	1	RESISTOR 7.5K 1% .05W F TC=0+-100	24546	C3=1/8-T0=7501-G
A7A1R56	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A7A1R57	0698-3446	3		RESISTOR 383 1% .125W F TC=0+-100	24546	C4=1/8-T0=383R-F
A7A1R58	0698-7246	9	1	RESISTOR 2.61K 1% .05W F TC=0+-100	24546	C3=1/8-T0=2611-G
A7A1R59	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196R-F
A7A1R60				NOT ASSIGNED		
A7A1R61	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A7A1R62	0757-0278	9	1	RESISTOR 1.78K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1781-F
A7A1R63	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A7A1R64	0698-3132	4	2	RESISTOR 261 1% .125W F TC=0+-100	24546	C4=1/8-T0=2610-F
A7A1R65	0698-0085	0		RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A7A1R66	0757-0421	4		RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0=825R-F
A7A1R67	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A7A1R68	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A7A1R69	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A7A1R70	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A7A1R71	0757-0274	5	1	RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1213-F
A7A1R72	0698-3132	4		RESISTOR 261 1% .125W F TC=0+-100	24546	C4=1/8-T0=2610-F
A7A1R73	0757-0317	7	1	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F
A7A1R74	0757-0289	2	1	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=1332-F
A7A1R75	0698-7236	7	1	RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1001-G
A7A1T1	08552-6044	1	2	TRANSFORMER, RF K=PIN	28480	08552-6044
A7A1T2	08552-6044	1		TRANSFORMER, RF K=PIN	28480	08552-6044
A7A1TP1	1251-0600	0	1	CONNECTOR=SGL CONT PIN 1,14=MM-BSC=SZ 8Q	28480	1251-0600
A7A1U1	1858-0032	8	1	TRANSISTOR ARRAY	01928	CA3146E
A7A1U2	1820-0328	6	1	IC GATE TTL NOR QUAD 2=INP	01295	SN7402N
A7A1U3	1820-1383	5	1	IC CNTR ECL BCD POS-EDGE-TRIG	04713	MC10138L
A7A1U4	1820-0802	1	1	IC GATE ECL NOR QUAD 2=INP	04713	MC10102P
A7A1U5	1820-0223	0	1	IC 301 OP AMP TO=99	04713	LM1301AG
A7A1U6	1820-0429	8	1	IC V RGLTR TO=39	18324	LM309H
A7A1VR1	1902-3082	9	1	DIODE=ZNR 4.64V 5% DO=7 PD=.4W TC=-.023%	28480	1902-3082
A7A1VR2	1902-3256	9	1	DIODE=ZNR 23.7V 5% DO=7 PD=.4W TC=+.076%	28480	1902-3256
A7A1W1	85660-60084	8	1	CABLE ASSEMBLY, GRAY/ORANGE	28480	85660-60084
				A7A1 MISCELLANEOUS PARTS		
	2190-0124	4	1	WASHER=LK INTL T NO. 10 .195=IN-ID	28480	2190-0124
	2200-0101	0	3	SCREW=MACH 4=40 .188=IN-LG PAN=HD=POZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	1	NUT=HEX=DL=CHAM 10=32=THD .067=IN=THK	28480	2950-0078
	86701-40001	9	2	EXTRACTOR, P.C. BOARD	28480	86701-40001

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A2	85660-60135	0	1	BOARD ASSEMBLY, 100 MHZ VOLTAGE-CONTROL-LED CRYSTAL OSCILLATOR (VCXO)	28480	85660-60135
A7A2C1	0121-0495	5	3	CAPACITOR-V TRMR-AIR 1.9-15.7PF 250V	28480	0121-0495
A7A2C2	0121-0495	5		CAPACITOR-V TRMR-AIR 1.9-15.7PF 250V	28480	0121-0495
A7A2C3	0121-0495	5		CAPACITOR-V TRMR-AIR 1.9-15.7PF 250V	28480	0121-0495
A7A2C4	0121-0453	5	1	CAPACITOR-V TRMR-AIR 1.3-5.4PF 250V	74970	187-0103-195
A7A2C5	0160-0049	9	1	CAPACITOR-FXD 20UF+75-10% 50VDC AL	56289	3002066050CC2
A7A2C6	0160-3456	6	5	CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A7A2C7	0160-3454	4	19	CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C8	0160-2257	3	1	CAPACITOR-FXD 10PF +-5% 500VDC CER 0+-60	28480	0160-2257
A7A2C9	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A7A2C10	0140-0191	8	1	CAPACITOR-FXD 56PF +-5% 300VDC MICA	72136	DM15E560J0300MV1CR
A7A2C11	0160-2204	0	1	CAPACITOR-FXD 100PF +-5% 300VDC MICA	28480	0160-2204
A7A2C12	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C13	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C14	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C15	0160-2265	3	1	CAPACITOR-FXD 22PF +-5% 500VDC CER 0+-30	28480	0160-2265
A7A2C16	0160-2255	1	1	CAPACITOR-FXD 8.2PF +--.25PF 500VDC CER	28480	0160-2255
A7A2C17	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C18	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C19	0160-2261	9	6	CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A7A2C20	0160-2261	9		CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A7A2C21	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C22	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C23	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C24	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C25	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C26	0160-2261	9		CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A7A2C27	0160-2261	9		CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A7A2C28	0160-3872	0	2	CAPACITOR-FXD 2.2PF +--.25PF 200VDC CER	28480	0160-3872
A7A2C29	0160-3872	0		CAPACITOR-FXD 2.2PF +--.25PF 200VDC CER	28480	0160-3872
A7A2C30	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C31	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C32	0160-2261	9		CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A7A2C33	0160-2261	9		CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A7A2C34	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C35	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C36	0160-3878	6	7	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A2C37	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A2C38	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A2C39	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C40	0160-2238	0	1	CAPACITOR-FXD 1.5PF +--.25PF 500VDC CER	28480	0160-2238
A7A2C41	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A2C42	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A2C43	0160-0116	1	2	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A7A2C44	0160-2253	9	1	CAPACITOR-FXD 6.8PF +--.25PF 500VDC CER	28480	0160-2253
A7A2C45	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A2C46	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A2C47	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C48	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A7A2C49	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A7A2C50	0160-0116	1		CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A7A2C51	0160-4299	7	1	CAPACITOR-FXD 2200PF +-20% 250VDC CER	56289	C067F251F222M822-COM
A7A2C52	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A7A2C53	0160-3456	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A7A2C54	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C55	0160-3454	4		CAPACITOR-FXD 220PF +-10% 1KVDC CER	28480	0160-3454
A7A2C56	0160-2437	1	1	CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A2CR1	0122-0072	6	1	DIODE-VVC 2.2PF 10%	02037	BB105B
A7A2CR2				NOT ASSIGNED		
A7A2CR3	1901-0539	3	2	DIODE-SCHOTTKY	28480	1901-0539
A7A2CR4	1901-0539	3		DIODE-SCHOTTKY	28480	1901-0539
A7A2J1				P/D A7A2W1		
A7A2J2	1250-0544	9	3	CONNECTOR-RF 8M-8NP M 8GL-HOLE-FR 50-OHM	28480	1250-0544
A7A2J3	1250-0544	9		CONNECTOR-RF 8M-8NP M 8GL-HOLE-FR 50-OHM	28480	1250-0544
A7A2J4	1250-0544	9		CONNECTOR-RF 8M-8NP M 8GL-HOLE-FR 50-OHM	28480	1250-0544
A7A2L1				NOT ASSIGNED		
A7A2L2	9100-2249	6	1	COIL-MLD 150NH 10% Q#34 .095DX,25LG-NOM	28480	9100-2249
A7A2L3	9140-0158	6	3	COIL-MLD 1UH 10% Q#32 .095DX,25LG-NOM	28480	9140-0158
A7A2L4	9100-2254	3	1	COIL-MLD 390NH 10% Q#35 .095DX,25LG-NOM	28480	9100-2254
A7A2L5	9100-2538	6	1	COIL-MLD 1UH 10% Q#44 .156DX,375LG-NOM	28480	9100-2538

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A2L6	9100-2251	0	4	COIL-MLD 220NH 10% Q=32 .095DX.25LG-NOM	28480	9100-2251
A7A2L7	9100-2251	0		COIL-MLD 220NH 10% Q=32 .095DX.25LG-NOM	28480	9100-2251
A7A2L8	9100-2251	0		COIL-MLD 220NH 10% Q=32 .095DX.25LG-NOM	28480	9100-2251
A7A2L9	9100-2251	0		COIL-MLD 220NH 10% Q=32 .095DX.25LG-NOM	28480	9100-2251
A7A2L10-12				P/O PC BOARD		
A7A2L13				NOT ASSIGNED		
A7A2L14	9100-2247	4	2	COIL-MLD 100NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A7A2L15	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A7A2L16	9140-0158	6		COIL-MLD 1UM 10% Q=32 .095DX.25LG-NOM	28480	9140-0158
A7A2L17	9140-0158	6		COIL-MLD 1UM 10% Q=32 .095DX.25LG-NOM	28480	9140-0158
A7A2L18	9140-0144	0	2	COIL-MLD 4.7UM 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A7A2L19	9140-0144	0		COIL-MLD 4.7UM 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A7A201	1854-0345	8	9	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A202	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A203	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A204	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A205	1854-0247	9	1	TRANSISTOR NPN SI TO-39 PDI=1W F=600MHZ	28480	1854-0247
A7A206	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A207	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A208	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A209	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A2010	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A7A2011	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A2R1	0757-0279	0	3	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A7A2R2	0757-0419	0	1	RESISTOR 681 1% .125W F TC=0+-100	24546	C4-1/8-T0-681R-F
A7A2R3	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A7A2R4	0757-0422	5	6	RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0-909R-F
A7A2R5	0698-3155	1	2	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4641-F
A7A2R6	0698-7224	3	1	RESISTOR 316 1% .05W F TC=0+-100	24546	C3-1/8-T0-316R-G
A7A2R7	0757-0346	2	2	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A7A2R8	0757-0422	5		RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0-909R-F
A7A2R9	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A7A2R10	0757-0401	0	7	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A7A2R11	0757-0394	0	5	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R12	0757-0416	7	6	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R13	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R14	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R15	0757-0422	5		RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0-909R-F
A7A2R16	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A7A2R17	0698-3150	6	8	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R18	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R19	0698-7198	0	2	RESISTOR 26.1 1% .05W F TC=0+-100	24546	C3-1/8-T0-26R1-G
A7A2R20	0698-3443	0	5	RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A7A2R21	0698-3429	2	3	RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A7A2R22	0698-3443	0		RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A7A2R23	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R24	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A7A2R25	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R26	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R27	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A7A2R28	0757-0422	5		RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0-909R-F
A7A2R29	0698-7198	0		RESISTOR 26.1 1% .05W F TC=0+-100	24546	C3-1/8-T0-26R1-G
A7A2R30	0698-3443	0		RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A7A2R31	0698-3429	2		RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A7A2R32	0698-3443	0		RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A7A2R33	0698-3443	0		RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A7A2R34	0698-3429	2		RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A7A2R35	0698-7223	2	1	RESISTOR 287 1% .05W F TC=0+-100	24546	C3-1/8-T0-287R-G
A7A2R36	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R37	0757-0422	5		RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0-909R-F
A7A2R38	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A7A2R39	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R40	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R41	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R42	0698-0084	9	3	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A7A2R43	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4641-F
A7A2R44	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A7A2R45	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A7A2R46	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A7A2R47	0757-0439	4	2	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A7A2R48	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R49	0757-0279	0		RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A7A2R50	0757-0439	4		RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A2R51	0757-0416	7	2	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A7A2R52	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A7A2R53	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A7A2R54	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A7A2R55	0757-0422	5		RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0-909R-F
A7A2R56	0698-3150	6	0	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R57	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A7A2R58	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A7A2R59	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A7A2R60	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A7A2R61	0757-0397	3	1	RESISTOR 68.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A7A2R62	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A7A2R63*						
A7A2R66				NOT ASSIGNED		
A7A2R67*	0698-3437	2	2	RESISTOR 133 1% .125W F TC=0+-100	24546	C4-1/8-T0-133R-F
A7A2R68*	0698-4037	0	1	RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-T0-46R4-F
A7A2R69*	0698-3437	2		RESISTOR 133 1% .125W F TC=0+-100	24546	C4-1/8-T0-133R-F
A7A2T1	08553-6012	5	3	TRANSFORMER, RF, BLUE	28480	08553-6012
A7A2T2	08553-6012	5		TRANSFORMER, RF, BLUE	28480	08553-6012
A7A2T3	08553-6012	5		TRANSFORMER, RF, BLUE	28480	08553-6012
A7A2TP1				P/O A7A2CS6		
A7A2TP2	1251-0600	0	3	CONNECTOR-SGL CONT PIN 1,14-MM-BSC-8Z SQ	28480	1251-0600
A7A2TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-8Z SQ	28480	1251-0600
A7A2TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-8Z SQ	28480	1251-0600
A7A2N1	85660-60082	6	1	CABLE ASSEMBLY, WHITE-BLUE	28480	85660-60082
A7A2Y1	0410-1086	5	1	CRYSTAL, QUARTZ 100 MHZQ-0.001%	28480	0410-1086
				A7A2 MISCELLANEOUS PARTS		
	1200-0173	5	2	INSULATOR-XSTR DAP-GL	28480	1200-0173
	86701-40001	9	2	(FOR Y1 AND Q5 SPACER) EXTRACTOR, PC BOARD	28480	86701-40001

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A3	85660-60136	1	1	BOARD ASSEMBLY, M/N PHASE DETECTOR	28480	85660-60136
A7A3C1	0160-4299	7	4	CAPACITOR-FXD 2200PF +-20% 250VDC CER	56289	C067F251F222M822-CDM
A7A3C2	0160-0574	3	6	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A7A3C3	0160-4299	7		CAPACITOR-FXD 2200PF +-20% 250VDC CER	56289	C067F251F222M822-CDM
A7A3C4	0160-0100	3	1	CAPACITOR-FXD 4.7UF+-10% 35VDC TA	56289	1500475X903582
A7A3C5	0160-0572	1	2	CAPACITOR-FXD 2200PF +-20% 100VDC CER	28480	0160-0572
A7A3C6	0160-0572	1		CAPACITOR-FXD 2200PF +-20% 100VDC CER	28480	0160-0572
A7A3C7	0160-3876	4	2	CAPACITOR-FXD 47PF +-20% 200VDC CER	28480	0160-3876
A7A3C8	0160-3877	5	1	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A7A3C9	0160-3876	4		CAPACITOR-FXD 47PF +-20% 200VDC CER	28480	0160-3876
A7A3C10	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A7A3C11	0160-3873	1	1	CAPACITOR-FXD 4.7PF +-5PF 200VDC CER	28480	0160-3873
A7A3C12	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A7A3C13	0160-3878	6	3	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A3C14	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A7A3C15	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A3C16	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A3C17	0160-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	1500225X9020A2
A7A3C18	0160-4299	7		CAPACITOR-FXD 2200PF +-20% 250VDC CER	56289	C067F251F222M822-CDM
A7A3C19	0160-0291	3	1	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	1500105X9035A2
A7A3C20	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A7A3C21	0160-4299	7		CAPACITOR-FXD 2200PF +-20% 250VDC CER	56289	C067F251F222M822-CDM
A7A3C22	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A7A3J1	1250-0690	6	1	CONNECTOR-RF 8MB M SGL-MOLE-FR 50-OMM	28480	1250-0690
A7A3J2				P/O A7A3M2		
A7A3J3				P/O A7A3M1		
A7A3L1	9100-1641	0	2	COIL-MLD 240UM 5% Q=65 .155DX.375LG-NOM	28480	9100-1641
A7A3L2	9100-2259	8	1	COIL-MLD 1.5UM 10% Q=32 .095DX.25LG-NOM	28480	9100-2259
A7A3L3	9100-1641	0		COIL-MLD 240UM 5% Q=65 .155DX.375LG-NOM	28480	9100-1641
A7A3L4	9100-2891	4	2	COIL-MLD 50NM 10% Q=40 .095DX.25LG-NOM	28480	9100-2891
A7A3L5	9100-2891	4		COIL-MLD 50NM 10% Q=40 .095DX.25LG-NOM	28480	9100-2891
A7A3L6	9100-2248	5	3	COIL-MLD 120NM 10% Q=34 .095DX.25LG-NOM	28480	9100-2248
A7A3L7	9100-2248	5		COIL-MLD 120NM 10% Q=34 .095DX.25LG-NOM	28480	9100-2248
A7A3L8	9100-2248	5		COIL-MLD 120NM 10% Q=34 .095DX.25LG-NOM	28480	9100-2248
A7A3Q1	1853-0451	5	2	TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A7A3Q2	1853-0451	5		TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A7A3Q3	1854-0345	8	2	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A3Q4	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A3R1	0698-3154	0	5	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A3R2	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A3R3	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A3R4	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A3R5	0698-7267	4	1	RESISTOR 19.6K 1% .05W F TC=0+-100	24546	C3-1/8-T0=1962-G
A7A3R6	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A7A3R7	0698-0083	8	2	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1961-F
A7A3R8	0698-7192	4	2	RESISTOR 14.7 1% .05W F TC=0+-100	24546	C3-1/8-T0=1477-G
A7A3R9	0757-0280	3	2	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A7A3R10	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A7A3R11	0698-3154	0		RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A3R12	0698-7212	9	1	RESISTOR 100 1% .05W F TC=0+-100	24546	C3-1/8-T0=100R-G
A7A3R13	0698-3157	3	2	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A7A3R14	0757-0416	7	4	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A7A3R15	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A7A3R16	0698-7248	1	3	RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3-1/8-T0=3161-G
A7A3R17	0698-7248	1		RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3-1/8-T0=3161-G
A7A3R18	0698-7223	2	1	RESISTOR 287 1% .05W F TC=0+-100	24546	C3-1/8-T0=287R-G
A7A3R19	0698-7256	1	1	RESISTOR 6.81K 1% .05W F TC=0+-100	24546	C3-1/8-T0=6811-G
A7A3R20	0698-7248	1		RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3-1/8-T0=3161-G
A7A3R21	0698-7220	9	2	RESISTOR 215 1% .05W F TC=0+-100	24546	C3-1/8-T0=215R-G
A7A3R22	0698-7220	9		RESISTOR 215 1% .05W F TC=0+-100	24546	C3-1/8-T0=215R-G
A7A3R23	0698-7192	4		RESISTOR 14.7 1% .05W F TC=0+-100	24546	C3-1/8-T0=1477-G
A7A3R24	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A7A3R25	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A7A3R26	0757-0441	8	2	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0=8251-F
A7A3R27	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0=8251-F
A7A3R28	0698-3157	3		RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1962-F
A7A3R29	0698-3162	0	1	RESISTOR 46.4K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4642-F
A7A3R30	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1961-F
A7A3TP1	1251-0600	0	7	CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z 8Q	28480	1251-0600
A7A3TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z 8Q	28480	1251-0600
A7A3TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z 8Q	28480	1251-0600
A7A3TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z 8Q	28480	1251-0600
A7A3TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B3C-8Z 8Q	28480	1251-0600

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A3TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-8Z SG	28480	1251-0600
A7A3TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-8Z SG	28480	1251-0600
A7A3U1	1820-1344	8	1	IC PL LOOP 14-DIP-C	04713	MC12040L
A7A3U2	1826-0092	3	1	IC OP AMP 10-99	28480	1826-0092
A7A3U3	1810-0251	3	3	NETWORK-RES 10-PIN-SIP .1-PIN-SPCG	28480	1810-0251
A7A3U4	1820-1225	4	2	IC FF ECL D-M/S DUAL	04713	MC10231P
A7A3U5	1810-0204	6	6	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R1K
A7A3U6	1820-0821	4	2	IC CNTR ECL BIN UP/DOWN SYNCHRO	04713	MC10136L
A7A3U7	1820-0802	1	4	IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A7A3U8	1810-0204	6		NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R1K
A7A3U9	1820-0806	5	2	IC GATE ECL OR-NOR DUAL 4-5-INP	04713	MC10109P
A7A3U10	1820-0820	3	2	IC FF ECL J-BAR K-BAR COM CLOCK DUAL	04713	MC10135L
A7A3U11	1810-0204	6		NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R1K
A7A3U12	1820-0802	1		IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A7A3U13	1810-0251	3		NETWORK-RES 10-PIN-SIP .1-PIN-SPCG	28480	1810-0251
A7A3U14	1820-1225	4		IC FF ECL D-M/S DUAL	04713	MC10231P
A7A3U15	1810-0204	6		NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R1K
A7A3U16	1820-0821	4		IC CNTR ECL BIN UP/DOWN SYNCHRO	04713	MC10136L
A7A3U17	1810-0251	3		NETWORK-RES 10-PIN-SIP .1-PIN-SPCG	28480	1810-0251
A7A3U18	1820-0802	1		IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A7A3U19	1810-0204	6		NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R1K
A7A3U20	1820-0806	5		IC GATE ECL OR-NOR DUAL 4-5-INP	04713	MC10109P
A7A3U21	1820-0820	3		IC FF ECL J-BAR K-BAR COM CLOCK DUAL	04713	MC10135L
A7A3U22	1810-0204	6		NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R1K
A7A3U23	1820-0802	1		IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A7A3U24	0955-0063	0	1	MIXER, DOUBLE-BALANCED	28480	0955-0063
A7A3VR1	1902-3082	9	1	DIODE-ZNR 4.64V 5% DO-7 PD=.4W TC=-.023X	28480	1902-3082
A7A3W1	85660-60083	7	1	CABLE ASSEMBLY, WHITE-RED	28480	85660-60083
A7A3W2	85660-60085	9	1	CABLE ASSEMBLY, GRAY-WHITE	28480	85660-60085
A7A3 MISCELLANEOUS PARTS						
	0340-0628	0	2	INSULATOR-XSTR NYLON WHITE (FOR Q3, Q4)	28480	0340-0628
	0520-0128	7	10	SCREW-MACH 2-56 .25-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	0520-0129	8	3	SCREW-MACH 2-56 .312-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	1205-0285	0	5	HEAT SINK SGL DIP-PKG (FOR U1, U4, U6, U14, AND U16)	28480	1205-0285
	2190-0014	1	13	WASHER-LK INTL T NO. 2 .089-IN-ID	28480	2190-0014
	2190-0124	4	5	WASHER-LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0101	0	2	SCREW-MACH 4-40 .188-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2200-0103	2	2	SCREW-MACH 4-40 .25-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	3	NUT-HEX-DBL-CHAM 10-32-THD .067-IN-THK	28480	2950-0078
	85660-20047	9	1	COVER, P.C. M/N DETECTOR	28480	85660-20047
	85660-20068	4	2	LUG-GROUND	28480	85660-20068
	86701-00032	2	1	HEAT SINK, IC	28480	86701-00032
	86701-00033	3	1	BRACKET, HEAT SINK	28480	86701-00033
	86701-40001	9	1	EXTRACTOR, P.C. BOARD	28480	86701-40001

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A4	85660-60113	4	1	BOARD ASSEMBLY, M/N OUTPUT (INCLUDES A7A4A1 M/N VCO ASSY & A7A4A2 M/N VCO BOARD ASSY)	28480	85660-60113
A7A4J1				SEE A7A4A2J1		
A7A4J2				SEE A7A4A2J2		
A7A4J3				SEE A7A4A2J3		
A7A4TP1				P/O A7A4A2C23		
A7A4A1	85660-60096	2	2	M/N VCO ASSEMBLY, M/N OUTPUT (INCLUDES A7A4A1A1 OSCILLATOR ASSEMBLY AND A7A4A1A2 BOARD ASSEMBLY)	28480	85660-60096
A7A4A1A1				OSCILLATOR ASSEMBLY, M/N VCO (P/O A7A4A1-NOT SEPARATELY REPLACEABLE)		
A7A4A1A1C1	86701-20046	0	1	PROBE	28480	86701-20046
A7A4A1A1C2	0160-4301	2	2	CAPACITOR=FXD 3.9PF +/-1PF 500VDC PORC	29990	ATC100-B=3R9-B=C=500
A7A4A1A1C3	0160-4301	2	2	CAPACITOR=FXD 3.9PF +/-1PF 500VDC PORC	29990	ATC100-B=3R9-B=C=500
A7A4A1A1C4				CAPACITANCE FORMED BY RESONATOR		
A7A4A1A1C5	86701-20049	3	1	SCREW, TUNING	28480	86701-20049
A7A4A1A1CR1	0122-0084	0	2	DIODE=VVC 5.25PF 5% C4/C45-MIN=2.4	28480	0122-0084
A7A4A1A1CR2	0122-0084	0	2	DIODE=VVC 5.25PF 5% C4/C45-MIN=2.4	28480	0122-0084
A7A4A1A1L1	9140-0158	6	1	COIL-MLD 1UM 10% Q=32 .095DX.25LG-NOM	28480	9140-0158
A7A4A1A1L2				COIL-MLD 1UM 10% Q=32 .095DX.25LG-NOM		
	9140-0158	6	1	COIL-MLD 1UM 10% Q=32 .095DX.25LG-NOM	28480	9140-0158
	0340-0039	7	1	TERMINAL BUSHING - TEFLON; MOUNTS IN	28480	0340-0039
	0380-0020	0	1	SPACER-RND .25-IN-LG .128-IN-ID	00000	ORDER BY DESCRIPTION
	0520-0128	7	3	SCREW=MACH 2-56 .25-IN-LG PAN=HD-POZI	00000	ORDER BY DESCRIPTION
	0520-0165	2	2	SCREW=MACH 2-56 .312-IN-LG 82 DEG	00000	ORDER BY DESCRIPTION
	0520-0133	4	1	SCREW=MACH 2-56 .5-IN-LG PAN=HD-POZI	00000	ORDER BY DESCRIPTION
	2190-0045	8	4	WASHER=LK HLCL NO. 2 .088-IN-ID	28480	2190-0045
	2190-0572	6	1	WASHER=LK HLCL NO. 0 .062-IN-ID .1-IN-OD	28480	2190-0572
	2200-0529	6	4	SCREW=MACH 4-40 .25-IN-LG 82 DEG	00000	ORDER BY DESCRIPTION
	2260-0002	6	1	NUT=HEX=DLB-CHAM 4-40-TMD .062-IN=THK	00000	ORDER BY DESCRIPTION
	2950-0028	9	1	NUT=HEX=DLB-CHAM 1/4-32-TMD .125-IN=THK	00000	ORDER BY DESCRIPTION
	3030-0422	4	1	SCREW=SKT HD CAP 0-80 .188-IN-LG SST-302	00000	ORDER BY DESCRIPTION
	3050-0161	8	1	WASHER=SPR WAVY 1/4 IN .265-IN-ID	28480	3050-0161
	3050-0672	2	1	WASHER=SHLDR NO. 4 .118-IN-ID .25-IN-OD	28480	3050-0672
	86701-20026	6	2	SCREW, SPECIAL FINISH	28480	86701-20026
	86701-20029	9	1	INSULATOR, CENTER TAP	28480	86701-20029
	86701-20035	7	1	LUG, SOLDER	28480	86701-20035
	86701-20041	5	1	HOUSING, VCO	28480	86701-20041
	86701-20042	6	1	ENDBELL, TOP	28480	86701-20042
	86701-20043	7	1	POST, CENTER	28480	86701-20043
	86701-20044	8	1	CAP, RESONATOR	28480	86701-20044
	86701-20045	9	1	TAP, CENTER POST	28480	86701-20045
	86701-20047	1	6	SUPPORT, RESONATOR	28480	86701-20047
	86701-20048	2	1	LUG, GROUND	28480	86701-20048
	86701-20053	9	1	ENDBELL, BOTTOM	28480	86701-20053
A7A4A1A2				BOARD ASSEMBLY, M/N VCO (P/O A7A4A1- NOT SEPARATELY REPLACEABLE)		
A7A4A1A2C1	0160-3878	6	6	CAPACITOR=FXD 1000PF +/-20% 100VDC CER	28480	0160-3878
A7A4A1A2C2	0160-3878	6	6	CAPACITOR=FXD 1000PF +/-20% 100VDC CER	28480	0160-3878
A7A4A1A2C3	0160-3879	7	2	CAPACITOR=FXD .01UF +/-20% 100VDC CER	28480	0160-3879
A7A4A1A2C4	0160-3878	6	6	CAPACITOR=FXD 1000PF +/-20% 100VDC CER	28480	0160-3878
A7A4A1A2C5	0180-0116	1	1	CAPACITOR=FXD 6.8UF +/-10% 35VDC TA	56289	1500685X9035B2
A7A4A1A2C6	0160-3878	6	6	CAPACITOR=FXD 1000PF +/-20% 100VDC CER	28480	0160-3878
A7A4A1A2C7	0160-3878	6	6	CAPACITOR=FXD 1000PF +/-20% 100VDC CER	28480	0160-3878
A7A4A1A2C8	0160-3873	1	1	CAPACITOR=FXD 4.7PF +/-5PF 200VDC CER	28480	0160-3873
A7A4A1A2C9	0160-3878	6	6	CAPACITOR=FXD 1000PF +/-20% 100VDC CER	28480	0160-3878
A7A4A1A2C10	0160-3879	7	7	CAPACITOR=FXD .01UF +/-20% 100VDC CER	28480	0160-3879
A7A4A1A2C11	0180-2161	0	1	CAPACITOR=FXD .75UF +/-10% 50VDC TA	56289	1500754X9050A2
A7A4A1A2J1				P/O A7A4A1A2W1		
A7A4A1A2J2	1251-0600	0	3	CONNECTOR=SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A7A4A1A2J3	1251-0600	0	3	CONNECTOR=SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A7A4A1A2J4	1251-0600	0	3	CONNECTOR=SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A7A4A1A2L1	9100-0346	0	0	COIL-MLD 50NH 20% Q=40 .095DX.25LG-NOM	28480	9100-0346
A7A4A1A2L2	9100-0346	0	0	COIL-MLD 50NH 20% Q=40 .095DX.25LG-NOM	28480	9100-0346
A7A4A1A2L3	86701-20051	7	7	INDUCTOR	28480	86701-20051
A7A4A1A2L4	9140-0158	6	6	COIL-MLD 1UM 10% Q=32 .095DX.25LG-NOM	28480	9140-0158
A7A4A1A2Q1	1854-0686	0	0	TRANSISTOR NPN S1 TO-72 PD=200MH FT=4GHZ	28480	1854-0686
A7A4A1A2Q2	1854-0610	0	0	TRANSISTOR NPN S1 TO-46 FT=800MHZ	28480	1854-0610
A7A4A1A2R1	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+/-100	24546	C4=1/8-T0=1001-F
A7A4A1A2R2	0698-7219	6	1	RESISTOR 196 1% .05W F TC=0+/-100	24546	C3=1/8-T0=196R-G

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A4A1A2R3	0698-7193	5	1	RESISTOR 16.2 1% .05W F TC=0+-100	24546	C3-1/8-T00=16R2-G
A7A4A1A2R4	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4221-F
A7A4A1A2R5	0757-0428	1	2	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1621-F
A7A4A1A2R6	0698-7262	9	1	RESISTOR 12.1K 1% .05W F TC=0+-100	24546	C3-1/8-T0=1212-G
A7A4A1A2R7	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1621-F
A7A4A1A2R8	0698-7254	9	1	RESISTOR 5.62K 1% .05W F TC=0+-100	24546	C3-1/8-T0=5621-G
A7A4A1A2R9	0698-7205	0	1	RESISTOR 51.1 1% .05W F TC=0+-100	24546	C3-1/8-T00=51R1-G
A7A4A1A2R10	0698-7265	2	1	RESISTOR 16.2K 1% .05W F TC=0+-100	24546	C3-1/8-T0=1622-G
A7A4A1A2R11	0698-7250	5	1	RESISTOR 3.83K 1% .05W F TC=0+-100	24546	C3-1/8-T0=3831-G
A7A4A1A2R12	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A7A4A1A2R13	0757-0400	9	1	RESISTOR 90.9 1% .125W F TC=0+-100	24546	C4-1/8-T0=90R9-F
A7A4A1A2W1	85660-60118	9	1	CABLE ASSEMBLY, WHITE	28480	85660-60118
A7A4A1A2W2	86701-20050	6	1	CABLE, JUMPER	28480	86701-20050
	0590-0526	6	1	A7A4A1A2 MISCELLANEOUS PARTS THREADED INSERT-NUT 4-40 .065-LG SST	28480	0590-0526
	1251-2313	6	2	CONNECTOR-SGL CONT SKT .04-IN-BSC-SZ RND	28480	1251-2313
	86701-20052	8	2	SPACER, INSULATOR	28480	86701-20052
A7A4A2				BOARD ASSY,M/N OUTPUT (PART OF A7A4 - NOT SEPARATELY REPLACEABLE		
A7A4A2C1	0160-3878	6	15	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C2	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C3	0160-3874	2	4	CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A7A4A2C4	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C5	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C6	0160-3873	1	2	CAPACITOR-FXD 4.7PF +-5PF 200VDC CER	28480	0160-3873
A7A4A2C7	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C8	0160-3873	1		CAPACITOR-FXD 4.7PF +-5PF 200VDC CER	28480	0160-3873
A7A4A2C9	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A7A4A2C10	0160-3872	0	1	CAPACITOR-FXD 2.2PF +-25PF 200VDC CER	28480	0160-3872
A7A4A2C11	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A7A4A2C12	0160-2261	9	1	CAPACITOR-FXD 15PF +-5% 500VDC CER 0+-30	28480	0160-2261
A7A4A2C13	0160-2290	4	2	CAPACITOR-FXD .15UF +-10% 80VDC POLYE	28480	0160-2290
A7A4A2C14	0160-2290	4		CAPACITOR-FXD .15UF +-10% 80VDC POLYE	28480	0160-2290
A7A4A2C15	0140-0196	3	1	CAPACITOR-FXD 150PF +-5% 300VDC MICA	72136	DM15F151J0300MV1CR
A7A4A2C16	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C17	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C18	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A7A4A2C19	0160-3876	4	1	CAPACITOR-FXD 47PF +-20% 200VDC CER	28480	0160-3876
A7A4A2C20	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C21	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C22	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C23	0160-4351	2	1	CAPACITOR-FDTHRU 1000PF 20% 200V CER	28480	0160-4351
A7A4A2C24	0160-0161	4	2	CAPACITOR-FXD .01UF +-10% 200VDC POLYE	28480	0160-0161
A7A4A2C25	0160-0153	4	1	CAPACITOR-FXD 1000PF +-10% 200VDC POLYE	28480	0160-0153
A7A4A2C26	0160-0161	4		CAPACITOR-FXD .01UF +-10% 200VDC POLYE	28480	0160-0161
A7A4A2C27	0160-3534	1	1	CAPACITOR-FXD 510PF +-5% 100VDC MICA	28480	0160-3534
A7A4A2C28	0160-0298	8	1	CAPACITOR-FXD 1500PF +-10% 200VDC POLYE	28480	0160-0298
A7A4A2C29	0180-0197	8	2	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A4A2C30	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C31	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A7A4A2C32	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C33	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C34	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2C35	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A7A4A2CR1	1901-0040	1	4	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A7A4A2CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A7A4A2CR3	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A7A4A2CR4	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A7A4A2J1	1250-0657	5	2	CONNECTOR-RF 3MB M SGL-HOLE-FR 50-OHM	28480	1250-0657
A7A4A2J2	1250-0657	5		CONNECTOR-RF 3MB M SGL-HOLE-FR 50-OHM	28480	1250-0657
A7A4A2J3	1250-0257	1	1	CONNECTOR-RF 3MB M PC 50-OHM	28480	1250-0257
A7A4A2L1	9100-2891	4	9	COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L2	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L3	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L4	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L5	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L6	9100-1634	1	1	COIL-MLD 75UH 5% Q=55 .155DX,375LG-NOM	28480	9100-1634
A7A4A2L7	9100-1635	2	1	COIL-MLD 91UH 5% Q=50 .155DX,375LG-NOM	28480	9100-1635
A7A4A2L8	9100-1620	5	1	COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A7A4A2L9	9140-0210	1	1	COIL-MLD 100UH 5% Q=50 .155DX,375LG-NOM	28480	9140-0210
A7A4A2L10	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L11	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L12	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L13	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A7A4A2L14	9140-0144	0	1	COIL-MLD 4.7UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0144

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A4A2Q1	1854-0345	8	7	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A4A2Q2	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A4A2Q3	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A4A2Q4	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A4A2Q5	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A4A2Q6	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A4A2Q7	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A7A4A2R1	0698-7212	9	4	RESISTOR 100 1% .05W F TC=0+-100	24546	C3=1/8-T0=100R-G
A7A4A2R2	0698-7248	1	5	RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3=1/8-T0=3161-G
A7A4A2R3	0698-7243	6	4	RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1961-G
A7A4A2R4	0698-7205	0	1	RESISTOR 51.1 1% .05W F TC=0+-100	24546	C3=1/8-T0=51R1-G
A7A4A2R5	0698-7223	2	3	RESISTOR 287 1% .05W F TC=0+-100	24546	C3=1/8-T0=287R-G
A7A4A2R6	0698-7248	1		RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3=1/8-T0=3161-G
A7A4A2R7	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1961-G
A7A4A2R8	0757-0316	6	1	RESISTOR 42.2 1% .125W F TC=0+-100	24546	C4=1/8-T0=42R2-F
A7A4A2R9	0698-7218	5	1	RESISTOR 178 1% .05W F TC=0+-100	24546	C3=1/8-T0=178R-G
A7A4A2R10	0698-7188	8	3	RESISTOR 10 1% .05W F TC=0+-100	24546	C3=1/8-T0=10R-G
A7A4A2R11	0698-7212	9		RESISTOR 100 1% .05W F TC=0+-100	24546	C3=1/8-T0=100R-G
A7A4A2R12	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A7A4A2R13	0698-7212	9		RESISTOR 100 1% .05W F TC=0+-100	24546	C3=1/8-T0=100R-G
A7A4A2R14	0757-1094	9	4	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1471-F
A7A4A2R15	0757-1094	9		RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1471-F
A7A4A2R16	0757-1094	9		RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1471-F
A7A4A2R17	0757-1094	9		RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1471-F
A7A4A2R18	0757-0290	5	1	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A7A4A2R19	0698-7248	1		RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3=1/8-T0=3161-G
A7A4A2R20	0698-7222	1	1	RESISTOR 261 1% .05W F TC=0+-100	24546	C3=1/8-T0=261R-G
A7A4A2R21	0698-7223	2		RESISTOR 287 1% .05W F TC=0+-100	24546	C3=1/8-T0=287R-G
A7A4A2R22	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3=1/8-T0=10R-G
A7A4A2R23	0698-7229	8	2	RESISTOR 511 1% .05W F TC=0+-100	24546	C3=1/8-T0=511R-G
A7A4A2R24	0698-7212	9		RESISTOR 100 1% .05W F TC=0+-100	24546	C3=1/8-T0=100R-G
A7A4A2R25	0698-7248	1		RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3=1/8-T0=3161-G
A7A4A2R26	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1961-G
A7A4A2R27	0698-7248	1		RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3=1/8-T0=3161-G
A7A4A2R28	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3=1/8-T0=511R-G
A7A4A2R29	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1961-G
A7A4A2R30	0698-7243	5	1	RESISTOR 31.6 1% .05W F TC=0+-100	24546	C3=1/8-T0=3161-G
A7A4A2R31	0698-7224	3	1	RESISTOR 316 1% .05W F TC=0+-100	24546	C3=1/8-T0=316R-G
A7A4A2R32	0698-7188	8		RESISTOR 10 1% .05W F TC=0+-100	24546	C3=1/8-T0=10R-G
A7A4A2R33	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A7A4A2R34	0757-0279	0	1	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3161-F
A7A4A2R35	0698-7223	2		RESISTOR 287 1% .05W F TC=0+-100	24546	C3=1/8-T0=287R-G
A7A4A2R36	0698-7210	7	1	RESISTOR 82.5 1% .05W F TC=0+-100	24546	C3=1/8-T0=82R5-G
A7A4A2U1	1826-0059	2	1	IC 201A OP AMP TO-99	04713	MLM201AG
A7A4A2U2	1820-0736	0	1	IC CNTR ECL BIN DUAL	28480	1820-0736
A7A4A2VR1	1902-3070	5	2	DIODE-ZNR 4.22V 5% DO-7 PDE.4W TC=-.038%	28480	1902-3070
A7A4A2VR2	1902-3070	5		DIODE-ZNR 4.22V 5% DO-7 PDE.4W TC=-.038%	28480	1902-3070
A7A4A2W1	85660-60103	2	1	JUMPER WIRE ASSEMBLY (A7A4A1 TO A7A4A2)	28480	85660-60103
A7A4A2 MISCELLANEOUS PARTS						
	0340-0628	0	7	INSULATOR-XSTR NYLON WHITE (FOR G1 THRU G7)	28480	0340-0628
	2190-0009	4	1	WASHER-LK INTL T NO. 8 .168-IN-ID	28480	2190-0009
	2190-0124	4	4	WASHER-LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0101	0	4	SCREW-MACH 4-40 .188-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2580-0002	4	1	NUT-MEX=DBL-CHAM 8-32-TMD .085-IN-TMK	00000	ORDER BY DESCRIPTION
	2950-0078	9	2	NUT-MEX=DBL-CHAM 10-32-TMD .067-IN-TMK	28480	2950-0078
	3050-0082	8	1	WASHER-FL NM NO. 4 .116-IN-ID .188-IN-OD	28480	3050-0082
	85660-20049	1	1	COVER, M/N OUTPUT PRINTED CIRCUIT	28480	85660-20049
	85660-20068	4	2	LUG, GROUND	28480	85660-20068
	86701-40001	9	1	EXTRACTOR, PC BOARD	28480	86701-40001

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A7A5	85660-60020	2	1	BOARD ASSEMBLY, M/N REFERENCE MOTHERBOARD	28480	85660-60020
A7A5C1	0160-2437	1	12	CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C2	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C3	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C4	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C5	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C6	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C7	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C8	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C9	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C10	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C11	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C12	0160-2437	1		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A7A5C13	0160-4083	7	2	CAPACITOR-FDTHRU 10PF 10% 200V CER	28480	0160-4083
A7A5C14	0160-4083	7		CAPACITOR-FDTHRU 10PF 10% 200V CER	28480	0160-4083
A7A5E1				PART OF PCB		
A7A5E2				PART OF PCB		
A7A5E3				PART OF PCB		
A7A5E4				PART OF PCB		
A7A5E5				PART OF PCB		
A7A5E6				PART OF PCB		
A7A5E7				PART OF PCB		
A7A5E8				PART OF PCB		
A7A5E9				PART OF PCB		
A7A5E10				NOT ASSIGNED		
A7A5E11				NOT ASSIGNED		
A7A5E12				NOT ASSIGNED		
A7A5E13				PART OF PCB		
A7A5E14				PART OF PCB		
A7A5E15	9170-0029	3	12	CORE-SHIELDING BEAD	28480	9170-0029
A7A5E16	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E17	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E18	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E19	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E20	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E21	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E22	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E23	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E24	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E25	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5E26	9170-0029	3		CORE-SHIELDING BEAD	28480	9170-0029
A7A5XA7A1	1251-4423	3	1	CONNECTOR-PC EDGE 15=CONT/ROW 1=ROW	28480	1251-4423
A7A5XA7A2	1251-4174	1	1	CONNECTOR-PC EDGE 15=CONT/ROW 1=ROW	28480	1251-4174
A7A5XA7A3	1251-2035	9	1	CONNECTOR-PC EDGE 15=CONT/ROW 2=ROWS	28480	1251-2035
A7A5XA7A4	1251-5020	8	1	CONNECTOR-PC EDGE 15=CONT/ROW 1=ROW	28480	1251-5020
XA7ASP1	5060-0112	8	2	CONNECTOR, 15=CONT, DIP	28480	5060-0112
XA7ASP2	5060-0112	8		CONNECTOR, 15=CONT, DIP	28480	5060-0112
				A7A5 MISCELLANEOUS PARTS		
	1251-0600	0	5	CONNECTOR-SGL CONT PIN 1.14=MM-BSC-32 8Q	28480	1251-0600
	2190-0007	2	2	WASHER-LK INTL T NO. 6 .141-IN-ID	28480	2190-0007
	2190-0009	4	12	WASHER-LK INTL T NO. 8 .168-IN-ID	28480	2190-0009
	2420-0003	7	2	NUT-MEX=OBL=CHAM 6-32=THD .094-IN=THK	00000	ORDER BY DESCRIPTION
	2580-0002	4	12	NUT-MEX=OBL=CHAM 8-32=THD .085-IN=THK	00000	ORDER BY DESCRIPTION
	85660-00037	5	1	INSULATOR, 15=PIN (FOR XA7A4)	28480	85660-00037
	85660-00050	2	1	INSULATOR (FOR XA7A2)	28480	85660-00050
	85660-00051	3	1	INSULATOR (FOR XA7A1)	28480	85660-00051

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A8	85660-60021	3	1	BOARD ASSEMBLY, RECTIFIER	28480	85660-60021
A8C1	0160-2055	9	3	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A8C2	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A8C3	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A8C4	0160-4084	8	2	CAPACITOR-FXD .1UF +20% 50VDC CER	28480	0160-4084
A8C5	0180-0230	0	1	CAPACITOR-FXD 1UF+-20% 50VDC TA	56289	150D105X0050A2
A8C6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A8C7	0180-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A8C8	0160-4005	3	4	CAPACITOR-FXD 1UF +-20% 100VDC CER	28480	0160-4005
A8C9	0160-4005	3		CAPACITOR-FXD 1UF +-20% 100VDC CER	28480	0160-4005
A8C10	0160-4005	3		CAPACITOR-FXD 1UF +-20% 100VDC CER	28480	0160-4005
A8C11	0160-4005	3		CAPACITOR-FXD 1UF +-20% 100VDC CER	28480	0160-4005
A8C12	0160-3638	6	1	CAPACITOR-FXD .22UF +80-20% 200VAC(RMS)	28480	0160-3638
A8CR1	1901-0662	3	13	DIODE-PWR RECT 100V 6A	04713	MR751
A8CR2	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR3	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR4	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR5	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR6	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR7	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR8	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR9	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR10	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR11	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR12	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR13	1901-0765	7	2	DIODE-PWR RECT 1N5812 50V 20A 35NS DO-4	12969	1N5812
A8CR14	1901-0765	7		DIODE-PWR RECT 1N5812 50V 20A 35NS DO-4	12969	1N5812
A8CR15				NOT ASSIGNED		
A8CR16	1884-0018	5	2	THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A8CR17	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A8CR18	1884-0018	5		THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A8DS1	1990-0487	7	1	LED-VISIBLE LUM=INT=1MCD IF=20MA-MAX	28480	5082-4584
A8F1	2110-0001	8	1	FUSE 1A 250V FAST-BLO 1.25X.25 UL IEC	75915	312001
A8R1	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A8R2	2100-3123	0	1	RESISTOR-TRMR 500 10% C 81DE=ADJ 17-TRN	02111	43P501
A8R3	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A8R4	0698-3444	1	1	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A8R5	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A8TP1	1251-0600	0	1	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 8Q	28480	1251-0600
A8U1	1826-0126	4	1	IC 7818 V RGLTR TO-3	04713	MC7818CK
A8VR1	1902-3263	8	1	DIODE-ZNR 24.9V 2% DO-7 PDM,4W TC=+.081%	28480	1902-3263
A8VR2	1902-3404	9	1	DIODE-ZNR 82.5V 5% DO-7 PDM,4W TC=+.082%	28480	1902-3404
				A8 MISCELLANEOUS PARTS		
	5000-9043	6	1	PINIP,C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	BOARD EXTRACTOR	28480	5040-6843
	1200-0081	4	2	INSULATOR-FLG-B3MG NYLON	28480	1200-0081
	2110-0269	0	2	FUSEMOLDER-CLIP TYPE,25D-FUSE	28480	2110-0269
	2200-0109	8	2	SCREW-MACH 4-40 .438-IN-LG PAN=HD-PDZI	00000	ORDER BY DESCRIPTION
	2740-0003	5	2	NUT-HEX-W/LKWR 10-32-TMD .125-IN-TMK	00000	ORDER BY DESCRIPTION
	86701-00018	4	1	HEATSINK, RECTIFIER	28480	86701-00018
A9	0960-0443	1	1	LINE MODULE (DOES NOT INCLUDE A9C1, A9F1 OR A9MP1)	28480	0960-0443
A9C1	0160-4065	5	1	CAPACITOR-FXD .1UF +-20% 250VAC(RMS)	28480	0160-4065
A9F1				SEE F1 IN TABLE 6-5.		
A9MP1	7120-8133	9	1	LABEL, LINE VOLTAGE/FUSE SELECTION	28480	7120-8133
A9MP1 (OPTION 400)	7120-8112	4	1	LABEL, LINE VOLTAGE/FUSE SELECTION (OPTION 400)	28480	7120-8112
A9TB1				P/O A9=NOT SEPARATELY REPLACEABLE		

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10				20/30 SYNTHESIZER		
A10A1	85660-60131	6	1	PHASE LOCK LOOP 1(PLL1) VOLTAGE CONTROL- LED OSCILLATOR (VCO)	28480	85660-60131
A10A1C1	0160-0574	3	8	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C2	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C3	0160-3875	3	3	CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A1C4	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C5	0160-3877	5	1	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A1C6	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C7	0160-3875	3		CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A1C8	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C9	0160-3878	6	3	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A1C10	0160-3874	2	5	CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A1C11	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A1C12	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A1C13	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A1C14	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A1C15	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A1C16	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A1C17	0160-3875	3		CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A1C18	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A1C19	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C20	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C21	0160-4695	7	3	CAPACITOR-FXD .027UF +-5% 50VDC CER	28480	0160-4695
A10A1C22	0160-4695	7		CAPACITOR-FXD .027UF +-5% 50VDC CER	28480	0160-4695
A10A1C23	0160-4695	7		CAPACITOR-FXD .027UF +-5% 50VDC CER	28480	0160-4695
A10A1C24	0160-4509	2	3	CAPACITOR-FXD .033UF +-5% 50VDC	28480	0160-4509
A10A1C25	0160-4510	5	1	CAPACITOR-FXD .039UF +-5% 50VDC	28480	0160-4510
A10A1C26	0160-0158	9	1	CAPACITOR-FXD 5600PF +-10% 200VDC POLYE	28480	0160-0158
A10A1C27	0160-0116	1	2	CAPACITOR-FXD 6.8UF +-10% 35VDC TA	56289	150D685X9035B2
A10A1C28	0160-0116	1		CAPACITOR-FXD 6.8UF +-10% 35VDC TA	56289	150D685X9035B2
A10A1C29	0160-0291	3	1	CAPACITOR-FXD 1UF +-10% 35VDC TA	56289	150D105X9035A2
A10A1C30	0160-0197	8	2	CAPACITOR-FXD 2.2UF +-10% 20VDC TA	56289	150D225X9020A2
A10A1C31	0160-4508	1	1	CAPACITOR-FXD .027UF +-5% 50VDC	28480	0160-4508
A10A1C32	0160-4299	7	1	CAPACITOR-FXD 2200PF +-20% 250VDC CER	56289	C067F251F222M922-CDM
A10A1C33	0160-4509	2		CAPACITOR-FXD .033UF +-5% 50VDC	28480	0160-4509
A10A1C34	0160-4509	2		CAPACITOR-FXD .033UF +-5% 50VDC	28480	0160-4509
A10A1C35	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A1C36	0160-0197	8		CAPACITOR-FXD 2.2UF +-10% 20VDC TA	56289	150D225X9020A2
A10A1CR1	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A10A1CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A10A1CR3	0122-0072	6	2	DIODE-VVC 2.2PF 5X C3/C25-MIN=4.5	04713	881058
A10A1CR4	0122-0072	6		DIODE-VVC 2.2PF 5X C3/C25-MIN=4.5	04713	881058
A10A1CR5	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A10A1CR6	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A10A1CR7	1901-0040	1		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A10A1J1				P/O A10A1M1		
A10A1J2	1250-0690	6	2	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
A10A1J3	1250-0690	6		CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
A10A1L1	9100-2257	6	2	COIL-MLD 820NM 10% Q=32 .095DX.25LG-NOM	28480	9100-2257
A10A1L2	9100-2891	4	1	COIL-MLD 50NM 10% Q=40 .095DX.25LG-NOM	28480	9100-2891
A10A1L3	9100-2257	6		COIL-MLD 820NM 10% Q=32 .095DX.25LG-NOM	28480	9100-2257
A10A1L4	85660-80004	4	1	INDUCTOR, 30 NH	28480	85660-80004
A10A1L5	85660-80005	5	1	INDUCTOR, 4 NH	28480	85660-80005
A10A1L6	9100-2258	7	2	COIL-MLD 1.2UM 10% Q=32 .095DX.25LG-NOM	28480	9100-2258
A10A1L7	85660-80008	8	2	INDUCTOR, FILTER .4 MH	28480	85660-80008
A10A1L8	85660-80008	8		INDUCTOR, FILTER .4 MH	28480	85660-80008
A10A1L9	9100-1647	6	1	COIL-MLD 470UM 5% Q=65 .19DX.44LG-NOM	28480	9100-1647
A10A1L10	9100-1788	6	3	CHOKER-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A1L11	9100-1788	6		CHOKER-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A1L12	9100-1788	6		CHOKER-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A1L13	9100-2258	7		COIL-MLD 1.2UM 10% Q=32 .095DX.25LG-NOM	28480	9100-2258
A10A1L14	9100-2254	3	2	COIL-MLD 390NM 10% Q=35 .095DX.25LG-NOM	28480	9100-2254
A10A1L15	9100-2254	3		COIL-MLD 390NM 10% Q=35 .095DX.25LG-NOM	28480	9100-2254
A10A1L16	9100-2247	4	1	COIL-MLD 100NM 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A10A1Q1	1855-0420	2	4	TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A10A1Q2	1854-0023	9	3	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A10A1Q3	1854-0345	8	4	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A1Q4	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A1Q5	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A1Q6	1855-0420	2		TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A10A1Q7	1855-0420	2		TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A10A1Q8	1855-0420	2		TRANSISTOR J-FET 2N4391 N-CHAN D-MODE	04713	2N4391
A10A1Q9	1854-0023	9		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A10A1Q10	1854-0023	9		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A10A1Q11	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A1R1	0757-0395	1	2	RESISTOR 56.2 1% .125W F TC=0+-100	24546	C4-1/8-T0-56R2-F
A10A1R2	0757-0280	3	11	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R3	0757-0317	7	1	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1331-F
A10A1R4	0757-0441	8	2	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A10A1R5	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R6	0757-0123	3	4	RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A10A1R7	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A10A1R8	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R9	0698-3444	1	1	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A10A1R10	0757-0460	1	1	RESISTOR 61.9K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6192-F
A10A1R11	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R12	0698-0082	7	1	RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0-4640-F
A10A1R13	0757-0428	1	2	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1621-F
A10A1R14	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R15	0757-0402	1	2	RESISTOR 110 1% .125W F TC=0+-100	24546	C4-1/8-T0-111-F
A10A1R16	0698-7195	7	1	RESISTOR 19.6 1% .05W F TC=0+-100	24546	C3-1/8-T00-19R6-G
A10A1R17	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R18	0698-3155	1	1	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4641-F
A10A1R19	0757-0428	1		RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1621-F
A10A1R20	0757-0395	1		RESISTOR 56.2 1% .125W F TC=0+-100	24546	C4-1/8-T0-56R2-F
A10A1R21	0698-3438	3	2	RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0-147R-F
A10A1R22	0698-3438	3		RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0-147R-F
A10A1R23	0757-0458	7	2	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A10A1R24	0757-0289	2	3	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A10A1R25	0757-0289	2		RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A10A1R26	0757-0416	7	4	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A1R27	0757-0123	3		RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A10A1R28	0757-0123	3		RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A10A1R29	0757-0440	7	2	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A10A1R30	0757-0440	7		RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A10A1R31	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A10A1R32	0757-0289	2		RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A10A1R33	0698-3155	5	1	RESISTOR 26.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2612-F
A10A1R34	0757-0290	5	2	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A10A1R35	0757-0458	7		RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A10A1R36	0757-0402	1		RESISTOR 110 1% .125W F TC=0+-100	24546	C4-1/8-T0-111-F
A10A1R37	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A10A1R38	0757-0123	3		RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A10A1R39	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A1R40	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A1R41	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A1R42	0698-7188	8	1	RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A10A1R43	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R44	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R45	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R46	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R47	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A1R48	0757-0462	3	4	RESISTOR 75K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7502-F
A10A1R49	0757-0462	3		RESISTOR 75K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7502-F
A10A1R50	0757-0462	3		RESISTOR 75K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7502-F
A10A1R51	0757-0462	3		RESISTOR 75K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7502-F
A10A1TP1	0360-0124	3	4	CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A10A1TP2	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A10A1TP3	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A10A1TP4	0360-0124	3		CONNECTOR-SGL CONT PIN .04-IN-BSC-SZ RND	28480	0360-0124
A10A1U1	1810-0204	6	1	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R1K
A10A1U2	1820-0802	1	1	IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A10A1U3	1820-1888	5	1	IC PRESCR ECL	04713	MC12013L
A10A1U4	1826-0161	7	1	IC 324 OP AMP 14=DIP-P	18324	LM324-A
A10A1U5	1820-1195	7	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A10A1U6	1826-0092	3	1	IC OP AMP TO-99	28480	1826-0092
A10A1VR1	1902-3048	7	1	DIODE-ZNR 3.48V 5% DO-7 PD=.4W TC=-.058%	28480	1902-3048
A10A1W1	85660-60089	3	1	CABLE ASSEMBLY, BROWN (FROM A10A5 PLL2 VCO TO A10A1J1)	28480	85660-60089

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
				A10A1 MISCELLANEOUS PARTS		
	86701-40001	9	1	EXTRACTOR, PC BOARD	28480	86701-40001
	2190-0124	4	6	WASHER=LK INTL T NO. 10 ,195-IN-ID	28480	2190-0124
	2200-0103	2	2	SCREW=MACH 4-40 ,25-IN-LG PAN=HD=POZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	3	NUT=HEX=DBL-CHAM 10-32-TMD ,067-IN=THK	28480	2950-0078
	85660-20052	6	1	PRINT CIRCUIT PLL1 VCO	28480	85660-20052
	85660-20068	4	3	LUG, GROUND	28480	85660-20068
	85660-00038	6	1	SHIELDING CAN	28480	85660-00038

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A2	85660-60023	5	1	BOARD ASSEMBLY, PHASE LOCK LOOP 1 (PLL1) DIVIDER	28480	85660-60023
A10A2C1	0160-0574	3	8	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C2	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C3	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C4	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C5	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C6	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C7	0160-0570	9	2	CAPACITOR-FXD 220PF +-20% 100VDC CER	28480	0160-0570
A10A2C8	0160-0570	9		CAPACITOR-FXD 220PF +-20% 100VDC CER	28480	0160-0570
A10A2C9	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C10	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A2C11	0160-3875	3	1	CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A2C12	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A2C13	0180-2207	5	1	CAPACITOR-FXD 100UF+-10% 10VDC TA	56289	150D107X9010R2
A10A2CR1	1901-0040	1	2	DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A10A2CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A10A2DS1	1990-0485	5	1	LED-VISIBLE LUM-INT=800UCD IF=30MA-MAX	28480	5082-4984
A10A2J1				P/O A10A2W1		
A10A2J2	1250-0690	6	1	CONNECTOR-RF 3MB M SGL-HQLE-FR 50-OMM	28480	1250-0690
A10A2L1	9100-2255	4	1	COIL-MLD 470NH 10% Q=35 .095DX.2SLG-NOM	28480	9100-2255
A10A2L2	9100-1788	6	1	CHOK- WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A2Q1	1853-0405	9	1	TRANSISTOR PNP 2N4209 SI TO-18 PD=300MW	28480	1853-0405
A10A2Q2	1853-0451	5	2	TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A10A2Q3	1853-0451	5		TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A10A2R1	0757-0280	3	19	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R2	0698-3431	6	1	RESISTOR 23.7 1% .125W F TC=0+-100	03888	PME55-1/8-T0=23R7-F
A10A2R3	0757-0403	2	2	RESISTOR 121 1% .125W F TC=0+-100	24546	C4-1/8-T0=121R-F
A10A2R4	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R5	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R6	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R1-F
A10A2R7	0757-0416	7	5	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A10A2R8	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A10A2R9	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1961-F
A10A2R10	0698-3440	7	4	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A10A2R11	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R12	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A10A2R13	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A10A2R14	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A10A2R15	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1002-F
A10A2R16	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R17	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A10A2R18	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R19	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R20	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R21	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R22	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R23	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R24	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R25	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R26	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R27	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R28	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R29	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R30	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0=511R-F
A10A2R31	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0=196R-F
A10A2R32	0757-0403	2		RESISTOR 121 1% .125W F TC=0+-100	24546	C4-1/8-T0=121R-F
A10A2R33	0757-0419	0	1	RESISTOR 681 1% .125W F TC=0+-100	24546	C4-1/8-T0=681R-F
A10A2R34	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2R35	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A2TP1	1251-0600	0	14	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP9	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP10	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A2TP11	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP12	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP13	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A2TP14	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A2U1	1820-0909	9	2	IC MULTR TTL	01295	8N74167N
A10A2U2	1820-0909	9		IC MULTR TTL	01295	8N74167N
A10A2U3	1820-0808	7	1	IC GATE ECL NOR DUAL 3-INP	04713	MC10111P
A10A2U4	1820-1225	4	1	IC FF ECL D-M/S DUAL	04713	MC10231P
A10A2U5	1820-1320	0	1	IC RCVR ECL LINE RCVR TPL 2-INP	04713	MC10216L
A10A2U6	1810-0204	6	4	NETWORK-RES 8-PIN-SIP ,1-PIN-SPCG	11236	750-81-R1K
A10A2U7	1820-0802	1	1	IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A10A2U8	1810-0204	6		NETWORK-RES 8-PIN-SIP ,1-PIN-SPCG	11236	750-81-R1K
A10A2U9	1820-1196	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74LS174N
A10A2U10	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74LS174N
A10A2U11	1810-0204	6		NETWORK-RES 8-PIN-SIP ,1-PIN-SPCG	11236	750-81-R1K
A10A2U12	1820-0821	4	1	IC CNTR ECL 8IN UP/DOWN SYNCHRO	04713	MC10136L
A10A2U13	1810-0204	6		NETWORK-RES 8-PIN-SIP ,1-PIN-SPCG	11236	750-81-R1K
A10A2U14	1820-0817	8	3	IC FF ECL D-M/S DUAL	04713	MC10131P
A10A2U15	1820-0817	8		IC FF ECL D-M/S DUAL	04713	MC10131P
A10A2U16	1820-0817	8		IC FF ECL D-M/S DUAL	04713	MC10131P
A10A2VR1	1902-3059	0	1	DIODE-ZNR 3,83V 5% DO-7 PD=.4W TC=-.051%	28480	1902-3059
A10A2W1	85660-60090	6	1	CABLE ASSEMBLY, ORANGE (FROM A10A3 PLL1 IF TO A10A2 J1)	28480	85660-60090
				A10A2 MISCELLANEOUS PARTS		
	86701-40001	9	2	EXTRACTOR, PC BOARD	28480	86701-40001
	0520-0128	7	2	SCREW-MACH 2-56 ,25-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	0610-0001	6	2	NUT-HEX-DBL-CHAM 2-56-THD ,062-IN-TMK	00000	ORDER BY DESCRIPTION
	1205-0285	0	1	HEAT SINK SGL DIP-PKG	28480	1205-0285
	2190-0014	1	2	WASHER-LK INTL T NO. 2 ,089-IN-ID	28480	2190-0014
	2190-0124	4	4	WASHER-LK INTL T NO. 10 ,195-IN-ID	28480	2190-0124
	2200-0103	2	2	SCREW-MACH 4-40 ,25-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	2	NUT-HEX-DBL-CHAM 10-32-THD ,067-IN-TMK	28480	2950-0078
	85660-20053	7	1	COVER, PC, PLL1 DIVIDER	28480	85660-20053
	85660-20068	4	2	LUG, GROUND	28480	85660-20068
	85660-00012	6	1	HEATSINK, BOTTOM	28480	85660-00012

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A3	85660-60024	6	1	BOARD ASSEMBLY, PHASE LOCK LOOP 1 (PLL1) IF	28480	85660-60024
A10A3C1	0160-3878	6	5	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A3C2	0160-0574	3	12	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C3	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A3C4	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A3C5	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C6	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A3C7	0160-3875	3	4	CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A3C8	0160-3875	3		CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A3C9	0160-3875	3		CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A3C10	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C11	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C12	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C13	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C14	0160-3876	4	1	CAPACITOR-FXD 47PF +-20% 200VDC CER	28480	0160-3876
A10A3C15	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C16	0160-3653	5	1	CAPACITOR-FXD 33PF +-5% 200VDC CER 0+-30	28480	0160-3653
A10A3C17	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A10A3C18	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A3C19	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C20	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C21	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C22	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C23	0160-3874	2	1	CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A3C24	0160-3875	3		CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A3C25	0160-3565	8	3	CAPACITOR-FXD 6.8PF +-5PF 100VDC CER	28480	0160-3565
A10A3C26	0160-3874	2	3	CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A3C27	0160-3565	8		CAPACITOR-FXD 6.8PF +-5PF 100VDC CER	28480	0160-3565
A10A3C28	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A3C29	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A3C30	0160-3565	8		CAPACITOR-FXD 6.8PF +-5PF 100VDC CER	28480	0160-3565
A10A3C31	0160-3873	1		CAPACITOR-FXD 4.7PF +-5PF 200VDC CER	28480	0160-3873
A10A3C32	0160-4289	5	1	CAPACITOR-FXD 15PF +-5% 100VDC CER 0+-30	51642	150100C0G150J
A10A3CR1	1901-0535	9	2	DIODE-SCMOTTKY	28480	1901-0535
A10A3CR2	1901-0535	9		DIODE-SCMOTTKY	28480	1901-0535
A10A3J1				PART OF A10A3W2		
A10A3J2				PART OF A10A3W1		
A10A3J3	1250-0690	6	1	CONNECTOR-RF 8MB M 8GL-HOLE-FR 50-OMM	28480	1250-0690
A10A3L1	9100-2256	5	3	COIL-MLD 560NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2256
A10A3L2	9100-2247	4	5	COIL-MLD 100NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A10A3L3	9100-2248	5	3	COIL-MLD 120NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2248
A10A3L4	9100-2248	5		COIL-MLD 120NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2248
A10A3L5	9100-2891	4	3	COIL-MLD 50NH 10% Q=40 .095DX.25LG-NOM	28480	9100-2891
A10A3L6	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A10A3L7	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A10A3L8	9100-1788	6	2	CHOKE-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A3L9	9100-1788	6		CHOKE-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A3L10	9100-0368	6	1	COIL-MLD 330NH 10% Q=28 .095DX.25LG-NOM	28480	9100-0368
A10A3L11	85660-80006	6	2	INDUCTOR, 120 NH	28480	85660-80006
A10A3L12	85660-80009	9	1	INDUCTOR, 100 NH	28480	85660-80009
A10A3L13	85660-80006	6		INDUCTOR, 120 NH	28480	85660-80006
A10A3L14	9100-2251	0	1	COIL-MLD 220NH 10% Q=32 .095DX.25LG-NOM	28480	9100-2251
A10A3L15	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A10A3L16	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2247
A10A3L17	9100-2248	5		COIL-MLD 120NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2248
A10A3L18	9100-2256	5		COIL-MLD 560NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2256
A10A3L19	9100-2256	5		COIL-MLD 560NH 10% Q=34 .095DX.25LG-NOM	28480	9100-2256
A10A3L20	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX.25LG-NOM	28480	9100-2891
A10A3L21	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX.25LG-NOM	28480	9100-2891
A10A3Q1	1854-0345	8	4	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A3Q2	1854-0378	7	1	TRANSISTOR NPN 2N5109 SI TO-39 PD=800MW	01928	2N5109
A10A3Q3	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A3Q4	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A3Q5	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A3R1	0757-0394	0	3	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0-51R1-F
A10A3R2	0698-3152	8	2	RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3481-F
A10A3R3	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0-825R-F
A10A3R4	0757-0401	0	3	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0-101-F
A10A3R5	0698-3429	2	3	RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55=1/8-T0-19R6-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A3R6	0698-3438	3	1	RESISTOR 147 1% .125W F TC=0+-100	24546	C4-1/8-T0-147R-F
A10A3R7	0698-3446	3	1	RESISTOR 383 1% .125W F TC=0+-100	24546	C4-1/8-T0-383R-F
A10A3R8	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A10A3R9	0757-0394	0		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A3R10	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101R-F
A10A3R11	0757-0397	3	1	RESISTOR 68.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A10A3R12	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101R-F
A10A3R13	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1621-F
A10A3R14	0698-3152	8		RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3481-F
A10A3R15	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A3R16	0698-3444	1	2	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A10A3R17	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A3R18	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A10A3R19	0757-0394	0		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A3R20	0698-3429	2		RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A10A3R21	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A3R22	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A3R23	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A3R24	0698-3429	2		RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A10A3R25	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A3R26	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A3R27	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A10A3U1	0955-0063	0	1	MIXER, DOUBLE BALANCE, 200MH	28480	0955-0063
A10A3W1	85660-60091	7	1	CABLE ASSEMBLY, YELLOW (FROM A10A4 PLL3 UP=CONVERTER TO A10A3J2)	28480	85660-60091
A10A3W2	85660-60092	8	1	CABLE ASSEMBLY, BLUE (FROM A10A1 PLL1 VCO TO A10A3J1)	28480	85660-60092
A10A3 MISCELLANEOUS PARTS						
	86701-40001	9	2	EXTRACTOR, PC BOARD	28480	86701-40001
	1200-0173	5	1	INSULATOR=XSTR DAP=GL	28480	1200-0173
	2190-0124	4	6	WASHER=LX INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0101	0	2	SCREW=MACH 4-40 .188-IN-LG PAN=HD=POZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	3	NUT=HEX=DBL-CHAM 10-32-TMD .067-IN-THK	28480	2950-0078
	85660-20054	8	1	COVER, PC PLL1 IF	28480	85660-20054
	85660-20068	4	3	LUG, GROUND	28480	85660-20068
	85660-00038	6	2	SHIELDING CAN	28480	85660-00038
	85660-00040	0	1	SHIELDING CAN	28480	85660-00040

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A4	85660-60025	7	1	BOARD ASSEMBLY, PHASE LOCK LOOP 3 (PLL3) UP CONVERTER	28480	85660-60025
A10A4C1	0160-0574	3	16	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C2	0160-0572	1	2	CAPACITOR-FXD 2200PF +-20% 100VDC CER	28480	0160-0572
A10A4C3	0160-0572	1		CAPACITOR-FXD 2200PF +-20% 100VDC CER	28480	0160-0572
A10A4C4	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C5	0160-4084	8	3	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A4C6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A4C7	0180-0291	3	2	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A10A4C8	0160-0161	4	2	CAPACITOR-FXD .01UF +-10% 200VDC POLYE	28480	0160-0161
A10A4C9	0160-0161	4		CAPACITOR-FXD .01UF +-10% 200VDC POLYE	28480	0160-0161
A10A4C10	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C11	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C12	0180-0228	6	3	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A10A4C13	0180-0291	3		CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A10A4C14	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C15	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C16	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C17	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A4C18	0160-3749	0	2	CAPACITOR-FXD 330PF +-10% 50VDC CER	28480	0160-3749
A10A4C19	0160-3877	5	3	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A4C20	0160-3749	0		CAPACITOR-FXD 330PF +-10% 50VDC CER	28480	0160-3749
A10A4C21	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A10A4C22	0160-3876	4	1	CAPACITOR-FXD 47PF +-20% 200VDC CER	28480	0160-3876
A10A4C23	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A10A4C24	0160-3877	5		CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A4C25	0160-0571	0	2	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A10A4C26	0160-3877	5		CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A4C27	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C28	0160-0571	0		CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A10A4C29	0160-3876	6	1	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3876
A10A4C30	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C31	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C32	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C33	0160-3875	3	3	CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A4C34	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C35	0160-3872	0	2	CAPACITOR-FXD 2.2PF +-25PF 200VDC CER	28480	0160-3872
A10A4C36	0160-3872	0		CAPACITOR-FXD 2.2PF +-25PF 200VDC CER	28480	0160-3872
A10A4C37	0160-3565	8	1	CAPACITOR-FXD 6.8PF +-5PF 100VDC CER	28480	0160-3565
A10A4C38	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C39	0160-3874	2	3	CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A4C40	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C41	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C42	0160-0574	3		CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A4C43	0160-3873	1	2	CAPACITOR-FXD 4.7PF +-5PF 200VDC CER	28480	0160-3873
A10A4C44	0160-3875	3		CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A4C45	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A4C46	0160-3874	2		CAPACITOR-FXD 10PF +-5PF 200VDC CER	28480	0160-3874
A10A4C47	0160-3873	1		CAPACITOR-FXD 4.7PF +-5PF 200VDC CER	28480	0160-3873
A10A4C48	0160-3875	3		CAPACITOR-FXD 22PF +-5% 200VDC CER 0+-30	28480	0160-3875
A10A4C49*	0160-4289	5	1	CAPACITOR-FXD 15PF +-5% 100VDC CER 0+-30	51642	150100C0G150J
A10A4C50	0121-0452	4	1	CAPACITOR-V TRMR-AIR 1.3-5.4PF 250V	74970	187-0103-005
A10A4CR1	1901-0050	3	4	DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A10A4CR2	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A10A4CR3	0122-0072	6	1	DIODE-VVC 2.2PF 5X C3/C25-MIN=4.5	04713	BB1058
A10A4CR4	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A10A4CR5	1901-0050	3		DIODE-SWITCHING 80V 200MA 2N8 DO-35	28480	1901-0050
A10A4DB1	1990-0485	5	1	LED-VISIBLE LUM=INT=800UCD IF=30MA=MAX	28480	5082-4984
A10A4J1				PART OF A10A4M1		
A10A4J2	1250-0690	6	2	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
A10A4J3	1250-0690	6		CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0690
A10A4J4	1250-0257	1	1	CONNECTOR-RF SMB M PC 50-OHM	28480	1250-0257
A10A4L1	9140-0179	1	2	COIL-MLD 22UH 10% Q=75 .155DX,375LG-NOM	28480	9140-0179
A10A4L2	9140-0179	1		COIL-MLD 22UH 10% Q=75 .155DX,375LG-NOM	28480	9140-0179
A10A4L3	9100-1788	6	2	CHOKES-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A4L4	9100-1788	6		CHOKES-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A4L5	9100-2258	7	7	COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A10A4L6	9100-2258	7		COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A10A4L7	9100-2258	7		COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A10A4L8	9100-2257	6	1	COIL-MLD 820NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2257
A10A4L9	9100-2254	3	1	COIL-MLD 390NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2254
A10A4L10	9100-2258	7		COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A4L11	85660-80006	6	3	INDUCTOR, 120 NH	28480	85660-80006
A10A4L12	9100-2255	4	1	COIL-MLD 470NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2255
A10A4L13	9100-2258	7		COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A10A4L14	9100-2258	7		COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A10A4L15	9100-2891	4	2	COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A10A4L16	85660-80006	6		INDUCTOR, 120 NH	28480	85660-80006
A10A4L17	85660-80006	6		INDUCTOR, 120 NH	28480	85660-80006
A10A4L18	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A10A4L19	9100-2258	7		COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A10A4L20	9100-2251	0	1	COIL-MLD 220NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2251
A10A4L21	9140-0158	6	1	COIL-MLD 1UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0158
A10A4L22	9140-0144	0	1	COIL-MLD 4.7UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0144
A10A4Q1	1854-0345	8	4	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A4Q2	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A4Q3	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A4Q4	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A4Q5	1855-0327	8	1	TRANSISTOR J-FET 2N4416 N-CHAN D-MODE	01295	2N4416
A10A4R1	0698-3440	7	3	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A10A4R2	0757-0394	0	2	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A10A4R3	0698-0083	8	3	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A10A4R4	0757-0418	9	1	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A10A4R5	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A4R6	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A4R7	0698-3159	5	2	RESISTOR 26.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2612-F
A10A4R8	0698-3159	5		RESISTOR 26.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2612-F
A10A4R9	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A4R10	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A4R11	0757-0438	3	3	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A10A4R12	0757-0441	8	3	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A10A4R13	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A10A4R14	0698-3160	8	1	RESISTOR 31.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3162-F
A10A4R15	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0-422R-F
A10A4R16	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A10A4R17	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A10A4R18	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A10A4R19	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A4R20	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A4R21	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A4R22	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4-1/8-T0-825R-F
A10A4R23	0757-0466	7		RESISTOR 110K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1103-F
A10A4R24	0698-3156	2	2	RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1472-F
A10A4R25	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A10A4R26	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A10A4R27	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A10A4R28	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A4R29	0757-0397	3	2	RESISTOR 68.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A10A4R30	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A4R31	0698-3156	2		RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1472-F
A10A4R32	0698-7219	6	1	RESISTOR 196 1% .05W F TC=0+-100	24546	C3-1/8-T0-196R-G
A10A4R33	0757-0397	3		RESISTOR 68.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A10A4R34	0698-3440	7		RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A10A4R35	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A10A4R36	0757-0279	0	1	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A10A4R37	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1471-F
A10A4R38	0698-7192	4	1	RESISTOR 14.7 1% .05W F TC=0+-100	24546	C3-1/8-T00-14R7-G
A10A4R39	0698-7230	1	2	RESISTOR 562 1% .05W F TC=0+-100	24546	C3-1/8-T0-562R-G
A10A4R40	0698-7188	8	1	RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R-G
A10A4R41	0698-7200	5	2	RESISTOR 31.6 1% .05W F TC=0+-100	24546	C3-1/8-T00-31R6-G
A10A4R42	0698-7236	7	2	RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A10A4R43	0698-7248	1	1	RESISTOR 3.16K 1% .05W F TC=0+-100	24546	C3-1/8-T0-3161-G
A10A4R44	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A10A4R45	0698-7230	1		RESISTOR 562 1% .05W F TC=0+-100	24546	C3-1/8-T0-562R-G
A10A4R46	0698-7218	5	2	RESISTOR 178 1% .05W F TC=0+-100	24546	C3-1/8-T0-178R-G
A10A4R47	0698-7200	5		RESISTOR 31.6 1% .05W F TC=0+-100	24546	C3-1/8-T00-31R6-G
A10A4R48	0698-7218	5		RESISTOR 178 1% .05W F TC=0+-100	24546	C3-1/8-T0-178R-G
A10A4R49	0698-7207	2	1	RESISTOR 61.9 1% .05W F TC=0+-100	24546	C3-1/8-T00-61R9-G
A10A4TP1	1251-0600	0	3	CONNECTOR-SGL CONT PIN 1.14=MM=BSC-SZ 8G	28480	1251-0600
A10A4TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14=MM=BSC-SZ 8G	28480	1251-0600
A10A4TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14=MM=BSC-SZ 8G	28480	1251-0600
A10A4U1	1826-0092	3	1	IC OP AMP TO-99	28480	1826-0092
A10A4U2	1826-0261	8	1	IC 741 OP AMP TO-99	28480	1826-0261
A10A4U3	1820-1383	5	1	IC CNTR ECL BCD POS-EDGE-TRIG	04713	MC10138L
A10A4U4	1810-0205	7	1	NETWORK-RES 8-PIN-SIP .1=PIN-SPCG	11236	750-81-R4,7K
A10A4U5	1820-0817	8	1	IC FF ECL D=M/S DUAL	04713	MC10131P

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A4U6	1820-0802	1	1	IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A10A4U7	0955-0063	0	1	MIXER, DOUBLE BALANCE, 200MH	28480	0955-0063
A10A4W1	85660-60093	9	1	CABLE ASSEMBLY, VIOLET (FROM A10A5 PLL2 VCO TO A10A4J1)	28480	85660-60093
				A10A4 MISCELLANEOUS PARTS		
	86701-40001	9	1	EXTRACTOR, PC BOARD	28480	86701-40001
	0340-0628	0	5	INSULATOR-XSTR NYLON WHITE (FOR G1 THRU G5)	28480	0340-0628
	2190-0124	4	6	WASHER-LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0101	0	2	SCREW-PACH 4-40 .168-IN-LG PAN-HD-PDZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	3	NUT-HEX-DBL-CHAM 10-32-TMD .067-IN-TMX	28480	2950-0078
	3050-0082	8	1	WASHER-FL NM NO. 4 .116-IN-ID .168-IN-OD (FOR J4)	28480	3050-0082
	85660-20055	9	1	COVER, PC PLL1 UP CONVERTER	28480	85660-20055
	85660-20068	4	3	LUG, GROUND	28480	85660-20068
	85660-00042	2	1	SHIELDING CAN	28480	85660-00042

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1045	85660-60026	8	1	BOARD ASSEMBLY, PHASE LOCK LOOP 2 (PLL2) VOLTAGE CONTROLLED OSCILLATOR	28480	85660-60026
A1045C1	0160-0300	3	1	CAPACITOR-FXD 2700PF +-10% 200VDC POLYE	28480	0160-0300
A1045C2	0160-0155	6	1	CAPACITOR-FXD 3300PF +-10% 200VDC POLYE	28480	0160-0155
A1045C3	0160-0154	5	1	CAPACITOR-FXD 2200PF +-10% 200VDC POLYE	28480	0160-0154
A1045C4	0160-3879	7	4	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A1045C5	0160-4084	8	14	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C6	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A1045C7	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A1045C8	0160-3878	6	6	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A1045C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C10	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A1045C11	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A1045C12	0160-4525	2	1	CAPACITOR-FXD 29PF +-5% 200VDC CER 0+-30	28480	0160-4525
A1045C13	0160-4524	1	1	CAPACITOR-FXD 24PF +-5% 200VDC CER 0+-30	28480	0160-4524
A1045C14	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A1045C15	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A1045C16	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A1045C17	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A1045C18	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C19	0160-0127	2	1	CAPACITOR-FXD .1UF +-20% 25VDC CER	28480	0160-0127
A1045C20	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C21	0160-0571	0	1	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A1045C22	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C23	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C24	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C25	0160-3877	5	1	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A1045C26	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C27	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C28	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C29	0160-2141	6	2	CAPACITOR-FXD 3.3UF+-10% 50VDC TA	56289	150D335X905082
A1045C30	0160-2141	6		CAPACITOR-FXD 3.3UF+-10% 50VDC TA	56289	150D335X905082
A1045C31	0160-1715	8	1	CAPACITOR-FXD 150UF+-10% 6VDC TA	56289	150D157X9006R2
A1045C32	0160-1746	5	2	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X902082
A1045C33	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C34	0160-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A1045C35	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C36	0160-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X902082
A1045C37	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045C38	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A1045CR1	0122-0078	2	4	DIODE-VVC 2.15PF 7% BVR=30V Q=225=MIN	28480	0122-0078
A1045CR2	0122-0078	2		DIODE-VVC 2.15PF 7% BVR=30V Q=225=MIN	28480	0122-0078
A1045CR3	0122-0078	2		DIODE-VVC 2.15PF 7% BVR=30V Q=225=MIN	28480	0122-0078
A1045CR4	0122-0078	2		DIODE-VVC 2.15PF 7% BVR=30V Q=225=MIN	28480	0122-0078
A1045J1				PART OF A1045W1		
A1045J2	1250-0544	9	4	CONNECTOR-RF SM-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A1045J3	1250-0544	9		CONNECTOR-RF SM-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A1045J4	1250-0544	9		CONNECTOR-RF SM-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A1045J5	1250-0544	9		CONNECTOR-RF SM-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A1045L1	9100-2584	2	2	COIL-MLD 8.2MH 10% Q=40 .156DX,375LG-NOM	28480	9100-2584
A1045L2	9100-2584	2		COIL-MLD 8.2MH 10% Q=40 .156DX,375LG-NOM	28480	9100-2584
A1045L3	9140-0144	0	1	COIL-MLD 4.7UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0144
A1045L4	9100-3358	0	2	COIL-MLD 162NH 5% Q=40 .19DX,385LG-NOM	28480	9100-3358
A1045L5	9100-3358	0		COIL-MLD 162NH 5% Q=40 .19DX,385LG-NOM	28480	9100-3358
A1045L6	9100-2251	0	1	COIL-MLD 220NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2251
A1045L7	9140-0158	6	2	COIL-MLD 1UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0158
A1045L8	9100-2247	4	8	COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L9	9100-2891	4	2	COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A1045L10	9100-2891	4		COIL-MLD 50NH 10% Q=40 .095DX,25LG-NOM	28480	9100-2891
A1045L11	9140-0158	6		COIL-MLD 1UH 10% Q=32 .095DX,25LG-NOM	28480	9140-0158
A1045L12	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L13	9100-2258	7	1	COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A1045L14	9100-2250	9	1	COIL-MLD 180NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2250
A1045L15	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L16	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L17	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L18	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L19	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L20	9100-2247	4		COIL-MLD 100NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2247
A1045L21	9100-1618	1	3	COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A1045L22	9100-1618	1		COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A1045L23	9100-1618	1		COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A501	1854-0610	0	2	TRANSISTOR NPN SI TO-46 FT=800MHZ	28480	1854-0610
A10A502	1854-0610	0		TRANSISTOR NPN SI TO-46 FT=800MHZ	28480	1854-0610
A10A503	1854-0345	8	2	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A504	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A10A505	1853-0281	9	2	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A10A506	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A10A5R1	0698-0085	0	1	RESISTOR 2.01K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2011-F
A10A5R2	2100-3273	1	2	RESISTOR-TRMR 2K10% C SIDE=ADJ 1-TRN	28480	2100-3273
A10A5R3	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1621-F
A10A5R4	2100-3273	1		RESISTOR-TRMR 2K10% C SIDE=ADJ 1-TRN	28480	2100-3273
A10A5R5	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1622-F
A10A5R6	0757-0401	0	3	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A10A5R7	0698-7205	0	2	RESISTOR 51.1 1% .05W F TC=0+-100	24546	C3-1/8-T00-51R1-G
A10A5R8	0698-7205	0		RESISTOR 51.1 1% .05W F TC=0+-100	24546	C3-1/8-T00-51R1-G
A10A5R9	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A5R10	0698-7228	7	2	RESISTOR 464 1% .05W F TC=0+-100	24546	C3-1/8-T0-464R-G
A10A5R11	0698-7228	7		RESISTOR 464 1% .05W F TC=0+-100	24546	C3-1/8-T0-464R-G
A10A5R12	0698-7188	8	1	RESISTOR 10 1% .05W F TC=0+-100	24546	C3-1/8-T00-10R1-G
A10A5R13	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A5R14	0757-0398	4	4	RESISTOR 75 1% .125W F TC=0+-100	24546	C4-1/8-T0-75R0-F
A10A5R15	0757-0398	4		RESISTOR 75 1% .125W F TC=0+-100	24546	C4-1/8-T0-75R0-F
A10A5R16	0757-0418	9	1	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A10A5R17	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A5R18	0757-0419	0	3	RESISTOR 681 1% .125W F TC=0+-100	24546	C4-1/8-T0-681R-F
A10A5R19	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A10A5R20	0757-0400	9	1	RESISTOR 90.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-90R9-F
A10A5R21	0757-9398	4	1	RESISTOR 75 1% .125W F TC=0+-100	24546	C4-1/8-T0-75R0-F
A10A5R22	0757-0398	4		RESISTOR 75 1% .125W F TC=0+-100	24546	C4-1/8-T0-75R0-F
A10A5R23	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A10A5R24	0698-4037	0	1	RESISTOR 46.4 1% .125W F TC=0+-100	24546	C4-1/8-T0-46R4-F
A10A5R25	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A10A5R26	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A5R27	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A10A5R28	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A5R29	0757-0316	6	1	RESISTOR 42.2 1% .125W F TC=0+-100	24546	C4-1/8-T0-42R2-F
A10A5R30	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A5R31	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A5R32	0698-3446	3	1	RESISTOR 383 1% .125W F TC=0+-100	24546	C4-1/8-T0-383R-F
A10A5R33	0698-3444	1	2	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A10A5R34	0757-0419	0		RESISTOR 681 1% .125W F TC=0+-100	24546	C4-1/8-T0-681R-F
A10A5R35	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A10A5R36	0757-0419	0		RESISTOR 681 1% .125W F TC=0+-100	24546	C4-1/8-T0-681R-F
A10A5R37	0757-0442	9	2	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A10A5R38	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A10A5R39	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A10A5R40	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A10A5R41	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A10A5R42	0757-0397	3	1	RESISTOR 68.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-68R1-F
A10A5R43	0698-3132	4	1	RESISTOR 261 1% .125W F TC=0+-100	24546	C4-1/8-T0-2610-F
A10A5R44	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A10A5T1	08553-6012	5	1	TRANSFORMER, RF BLUE	28480	08553-6012
A10A5TP1	1251-0600	0	1	CONNECTOR-SGL CONT PIN 1,14-MM-BSC-8Z 80	28480	1251-0600
A10A5U1	1820-1383	5	2	IC CNTR ECL BCD POS-EDGE-TRIG	04713	MC10138L
A10A5U2	1820-1383	5		IC CNTR ECL BCD POS-EDGE-TRIG	04713	MC10138L
A10A5U3	1820-2047	0	1	IC DIVR ECL QUINARY	52648	8P86228DG
A10A5U4	1810-0205	7	1	NETWORK-RES 8-PIN-SHIP .1-PIN-SPCG	11236	750-81-R4,7K
A10A5U5	1820-0802	1	3	IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A10A5U6	1820-0802	1		IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A10A5U7	1820-0802	1		IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A10A5W1	85660-60088	2	1	CABLE ASSEMBLY, GRAY/ORANGE (FROM A10A8 PLL2 DISCRIMINATOR TO A10A5J1)	28480	85660-60088
				A10A5 MISCELLANEOUS PARTS		
	86701-40001	9	2	EXTRACTOR, PC BOARD	28480	86701-40001
	0340-0628	0	6	INSULATOR-XSTR NYLON WHITE (FOR Q1 THRU Q4)	28480	0340-0628
	2190-0124	4	1	WASHER-LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0101	0	2	SCREW-MACH 4-40 .188-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	1	NUT-MEX-DBL-CHAM 10-32-THD .067-IN-TMK	28480	2950-0078
	85660-20056	0	1	COVER, PC PLL2 VCO	28480	85660-20056

See introduction to this section for ordering information
*Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A6	85660-60130	5	1	BOARD ASSEMBLY, PHASE LOCK LOOP 2 (PLL2) PHASE DETECTOR	28480	85660-60130
A10A6C1	0160-0197	8	4	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A10A6C2	0160-0574	3	1	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A10A6C3	0160-3879	7	1	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A10A6C4	0160-0127	2	2	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A10A6C5	0160-0127	2	2	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A10A6C6	0160-2199	2	2	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A10A6C7	0160-3658	0	1	CAPACITOR-FXD 10UF +-10% 50VDC MET-POLYC	28480	0160-3658
A10A6C8	0160-4084	8	4	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A6C9	0160-0573	2	1	CAPACITOR-FXD 4700PF +-20% 100VDC CER	28480	0160-0573
A10A6C10	0160-2199	2	2	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A10A6C11	0160-0291	3	3	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A10A6C12	0160-0291	3	3	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A10A6C13	0160-0575	4	3	CAPACITOR-FXD .047UF +-20% 50VDC CER	28480	0160-0575
A10A6C14	0160-0575	4	3	CAPACITOR-FXD .047UF +-20% 50VDC CER	28480	0160-0575
A10A6C15	0160-0575	4	3	CAPACITOR-FXD .047UF +-20% 50VDC CER	28480	0160-0575
A10A6C16	0160-4084	8	4	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A6C17	0160-0291	3	3	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A10A6C18	0160-4084	8	4	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A6C19	0160-0197	8	4	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A10A6C20	0160-4084	8	4	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A6C21	0160-0197	8	4	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A10A6C22	0160-0197	8	4	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A10A6C23	0160-2437	1	2	CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A10A6C24	0160-2437	1	2	CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A10A6CR1	1901-0033	2	2	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A10A6CR2	1901-0376	6	2	DIODE-GEN PRP 35V 50MA DO-35	28480	1901-0376
A10A6CR3	1901-0376	6	2	DIODE-GEN PRP 35V 50MA DO-35	28480	1901-0376
A10A6CR4	1901-0033	2	2	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A10A6L1	9100-1651	2	1	COIL-MLD 750UH 5% Q=60 .19DX.44LG-NOM	28480	9100-1651
A10A6L2	9140-0144	0	3	COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A10A6L3	9140-0144	0	3	COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A10A6L4	9140-0144	0	3	COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A10A6Q1	1853-0281	9	2	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A10A6Q2	1854-0477	7	1	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A10A6Q3	1855-0386	9	1	TRANSISTOR J-FET 2N4392 N=CHAN D-MODE	04713	2N4392
A10A6Q4	1853-0322	9	1	TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A10A6Q5	1854-0557	4	1	TRANSISTOR NPN 2N2432A SI TO-18 PD=300MW	01295	2N2432A
A10A6Q6	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A10A6Q7	1853-0281	9	2	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A10A6Q8	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A10A6Q9	1853-0007	7	2	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A10A6Q10	1853-0007	7	2	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A10A6R1	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A6R2	0757-0317	7	2	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F
A10A6R3	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A6R4	0757-0317	7	2	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F
A10A6R5	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A10A6R6	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196R-F
A10A6R7	0757-0123	3	1	RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A10A6R8	0698-0082	7	1	RESISTOR 464 1% .125W F TC=0+-100	24546	C4=1/8-T0=4640-F
A10A6R9	0757-0442	9	3	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A10A6R10	0698-3260	9	1	RESISTOR 464K 1% .125W F TC=0+-100	28480	0698-3260
A10A6R11	0757-0290	5	1	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0=6191-F
A10A6R12	0757-0420	3	1	RESISTOR 750 1% .125W F TC=0+-100	24546	C4=1/8-T0=751-F
A10A6R13	0698-0084	9	3	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A10A6R14	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A6R15	0757-0442	9	3	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A10A6R16	0757-0439	4	1	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0=6811-F
A10A6R17	0757-0444	1	1	RESISTOR 12.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1212-F
A10A6R18	0698-0084	9	3	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F
A10A6R19	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A6R20	0698-3445	2	3	RESISTOR 348 1% .125W F TC=0+-100	24546	C4=1/8-T0=348R-F
A10A6R21	0698-3445	2	3	RESISTOR 348 1% .125W F TC=0+-100	24546	C4=1/8-T0=348R-F
A10A6R22	0757-0280	3	5	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A6R23	0757-0279	0	1	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3161-F
A10A6R24	0757-0442	9	3	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A10A6R25	0757-0462	3	1	RESISTOR 75K 1% .125W F TC=0+-100	24546	C4=1/8-T0=7502-F
A10A6R26	0757-0467	8	1	RESISTOR 121K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1213-F
A10A6R27	0698-3266	5	1	RESISTOR 237K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2373-F
A10A6R28	0698-3460	1	1	RESISTOR 422K 1% .125W F TC=0+-100	28480	0698-3460
A10A6R29	0757-0438	3	2	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A10A6R30	0698-0084	9	3	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2151-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A6R31	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4221-F
A10A6R32	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A10A6R33	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A10A6R34	0698-3445	2		RESISTOR 348 1% .125W F TC=0+-100	24546	C4=1/8-T0=348R-F
A10A6R35	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A10A6TP1	1251-0600	0	5	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A6TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A6TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A6TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A6TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A6U1	1826-0026	3	1	IC 311 COMPARTOR T0-99	04713	MLM311G
A10A6U2	1826-0459	6	1	IC OP AMP 14-DIP-C	27014	LM0042CD
A10A6U3	1826-0059	2	2	IC 201A OP AMP T0-99	04713	MLM201AG
A10A6U4	1826-0059	2		IC 201A OP AMP T0-99	04713	MLM201AG
A10A6U5	1820-0429	8	1	IC V RGLTR T0-39	18324	LM309H
A10A6U6	1826-0448	3	2	IC-DIGITAL-ANALOG CONV 7520	28480	1826-0448
A10A6U7	1820-1425	6	1	IC SCHMITT-TRIG TTL LS NAND GUAC 2-INP	01295	SN74LS132N
A10A6U8	1820-1194	6	2	IC CNTR TTL LS BIN UP/DOWN SYNCHRO	01295	SN74LS193N
A10A6U9	1820-1194	6		IC CNTR TTL LS BIN UP/DOWN SYNCHRO	01295	SN74LS193N
A10A6U10	1826-0448	3	1	IC-DIGITAL-ANALOG CONV 7520	28480	1826-0448
A10A6VR1				NOT ASSIGNED		
A10A6VR2	1902-0041	4	2	DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
A10A6VR3	1902-0041	4		DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
A10A6VR4	1902-3002	3	1	DIODE-ZNR 2.37V 5% DO-7 PD=.4W TC=-.074%	28480	1902-3002
				A10A6 MISCELLANEOUS PARTS		
	86701-40001	9	2	EXTRACTOR, PC BOARD	28480	86701-40001
	2190-0009	4	2	WASHER-LK INTL T NO. 8 .168-IN-ID	28480	2190-0009
	2200-0101	0	2	SCREW-MACH 4-40 .188-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2580-0002	4	2	NUT-MEX-DBL-CHAM 8-32-THD .085-IN-THK	00000	ORDER BY DESCRIPTION
	85600-20057	1	1	COVER, PC PHASE DETECTOR	28480	85600-20057

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A7	85660-60028	0	1	BOARD ASSEMBLY, PHASE LOCK LOOP 2 (PLL2) DIVIDER	28480	85660-60028
A10A7C1	0160-3877	5	2	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A7C2	0160-3879	7	2	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A10A7C3	0160-4084	8	12	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C4	0160-3877	5	8	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A7C5	0160-4084	8	8	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C6	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C8	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A10A7C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C10	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C11	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C12	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C13	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C14	0160-0570	9	1	CAPACITOR-FXD 220PF +-20% 100VDC CER	28480	0160-0570
A10A7C15	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C16	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C17	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A7C18	0180-1746	5	2	CAPACITOR-FXD 15UF+-10% 20VDC 1A	56289	150D156X902082
A10A7C19	0180-1746	5	5	CAPACITOR-FXD 15UF+-10% 20VDC 1A	56289	150D156X902082
A10A7CR1	1901-0743	1	2	DIODE-PWR RECT 1N4004 400V 1A DO-41	01295	1N4004
A10A7CR2	1901-0743	1		DIODE-PWR RECT 1N4004 400V 1A DO-41	01295	1N4004
A10A7J1				PART OF A10A7W1		
A10A7J2	1250-0544	9	1	CONNECTOR-RF 3M-SNP M SGL-HOLE=FR 50-OHM	28480	1250-0544
A10A7L1	9100-2250	9	1	COIL-MLD 180NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2250
A10A7L2	9100-1788	6	1	CHOK-WIDE BAND ZMAX=680 OHM@ 180 MHZ	02114	VK200 20/48
A10A7L3	9100-1618	1	2	COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A10A7L4	9100-1618	1		COIL-MLD 5.6UH 10% Q=45 .155DX,375LG-NOM	28480	9100-1618
A10A7Q1	1854-0546	1	1	TRANSISTOR NPN SI T0-72 PD=200MW	28480	1854-0546
A10A7Q2	1854-0019	3	1	TRANSISTOR NPN SI T0-18 PD=360MW	28480	1854-0019
A10A7R1	0757-0276	7	1	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4=1/8-T0=6192-F
A10A7R2	0757-0279	0	1	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3161-F
A10A7R3	0757-0280	3	7	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A7R4	0757-0395	1	1	RESISTOR 56.2 1% .125W F TC=0+-100	24546	C4=1/8-T0=56R2-F
A10A7R5	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A10A7R6	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A7R7	0698-3444	1	1	RESISTOR 316 1% .125W F TC=0+-100	24546	C4=1/8-T0=316R-F
A10A7R8	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1962-F
A10A7R9	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A7R10	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A7R11	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A7R12	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A7R13	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A7R14	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A10A7TP1	1251-0600	0	5	CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A7TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A7TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A7TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A7TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A10A7U1	1820-1888	5	1	IC PRESER ECL	04713	MC12013L
A10A7U2	1820-0681	4	1	IC GATE TTL S NAND QUAD 2-INP	01295	SN74800N
A10A7U3	1820-0629	0	2	IC FF TTL S J-K NEG-EDGE-TRIG	01295	SN748112N
A10A7U4	1820-1251	6	5	IC CNTR TTL LS DECD ASYNCHRO	01295	SN74LS196N
A10A7U5	1820-0909	9	2	IC MULTR TTL	01295	SN74167N
A10A7U6	1820-0909	9		IC MULTR TTL	01295	SN74167N
A10A7U7	1820-1251	6		IC CNTR TTL LS DECD ASYNCHRO	01295	SN74LS196N
A10A7U8	1820-1251	6		IC CNTR TTL LS DECD ASYNCHRO	01295	SN74LS196N
A10A7U9	1820-0686	9	1	IC GATE TTL S AND TPL 3-INP	01295	SN74811N
A10A7U10	1820-0629	0		IC FF TTL S J-K NEG-EDGE-TRIG	01295	SN748112N
A10A7U11	1820-0261	6	1	IC MV TTL MONOSTBL	01295	SN74121N
A10A7U12	1820-1196	8	3	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A10A7U13	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A10A7U14	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A10A7U15	1820-1251	6		IC CNTR TTL LS DECD ASYNCHRO	01295	SN74LS196N
A10A7U16	1820-1251	6		IC CNTR TTL LS DECD ASYNCHRO	01295	SN74LS196N
A10A7W1	85660-60087	1	1	CABLE ASSEMBLY, WHITE/BLUE (FROM A10A5 (PLL2) VCO TO A10A7J1)	28480	85660-60087

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
				A10A7 MISCELLANEOUS PARTS		
	85660-40001	7	2	EXTRACTOR, PC BOARD	28480	85660-40001
	2190-0124	4	1	WASHER-LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0101	0	2	SCREW-MACH 8-40 .188-IN-LG PAN-RO-POZI	00000	ORDER BY DESCRIPTION
	2950-0078	9	1	NUT-HEX-DBL-CHAM 10-32-TMD .067-IN-THK	28480	2950-0078
	85660-20058	2	1	COVER, PC (PLL2) DIVIDER	28480	85660-20058

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A8	85660-60129	2	1	BOARD ASSEMBLY, PHASE LOCK LOOP 2 (PLL2) DISCRIMINATOR	28480	85660-60129
A10A8C1	0160-4084	8	10	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C2	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C3	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C4	0180-0291	3	1	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A10A8C5	0180-0197	8	2	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A10A8C6	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A10A8C7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C8	0180-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X9010B2
A10A8C9	0160-3879	7	3	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A10A8C10	0160-2199	2	2	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A10A8C11	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C12	0160-0571	0	1	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A10A8C13	0160-0127	2	2	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A10A8C14	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C15	0160-4605	9	1	CAPACITOR-FXD 36PF +-2% 500VDC CER 0+-30	28480	0160-4605
A10A8C16	0160-2252	8	1	CAPACITOR-FXD 6.2PF +--.25PF 500VDC CER	28480	0160-2252
A10A8C17	0160-3877	5	2	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A8C18	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C19	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C20	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A10A8C21	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C22	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A10A8C23	0160-0161	4	1	CAPACITOR-FXD .01UF +-10% 200VDC POLYE	28480	0160-0161
A10A8C24	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A10A8C25	0160-3456	6	1	CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3456
A10A8C26	0160-2199	2		CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A10A8C27	0160-3877	5		CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A10A8C28	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A10A8C29	0160-2437	1	1	CAPACITOR-PDTHRU 5000PF +80 -20% 200V	28480	0160-2437
A10A8CR1	1901-0539	3	2	DIODE-3CHOTTKY	28480	1901-0539
A10A8CR2	1901-0539	3		DIODE-3CHOTTKY	28480	1901-0539
A10A8J1				PART OF A10A8W2		
A10A8J2	1250-0544	9	1	CONNECTOR-RF 3M-SNP M 3GL-HOLE-FR 50-OMH	28480	1250-0544
A10A8J3				PART OF A10A8W1		
A10A8L1	9140-0144	0	4	COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A10A8L2	9140-0144	0		COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A10A8L3	9140-0144	0		COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A10A8L4	9140-0247	4	1	COIL 22UH 2% Q=80 .32LG-NOM SRF=22MHZ	28480	9140-0247
A10A8L5	9100-1629	4	1	COIL-MLD 4.7UH 5% Q=55 .155DX.375LG-NOM	28480	9100-1629
A10A8L6	9100-1666	9	1	COIL-MLD 3.6MH 5% Q=70 .215DX.56LG-NOM	28480	9100-1666
A10A8L7	9140-0144	0		COIL-MLD 4.7UH 10% Q=45 .095DX.25LG-NOM	28480	9140-0144
A10A8Q1	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MH	28480	1854-0404
A10A8Q2	1853-0281	9	2	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MH	04713	2N2907A
A10A8Q3	1854-0475	5	1	TRANSISTOR-DUAL NPN PD=750MH	28480	1854-0475
A10A8Q4	1855-0413	3	1	TRANSISTOR J-FET P-CHAN D-MODE TO-18 SI	27014	2N5116
A10A8Q5	1853-0269	3	1	TRANSISTOR-DUAL PNP 2N3809 PD=600MH	28480	1853-0269
A10A8Q6	1853-0007	7	1	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MH	04713	2N3251
A10A8Q7	1854-0019	3	1	TRANSISTOR NPN SI TO-18 PD=360MH	28480	1854-0019
A10A8Q8	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MH	04713	2N2907A
A10A8Q9	1854-0247	9	1	TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A10A8Q10	1853-0388	7	1	TRANSISTOR-DUAL PNP PD=600MH	28480	1853-0388
A10A8Q11	1853-0034	0	1	TRANSISTOR PNP SI TO-18 PD=360MH	28480	1853-0034
A10A8R1	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A10A8R2	0757-0199	3	1	RESISTOR 21.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2152-F
A10A8R3	0757-0123	3	1	RESISTOR 34.8K 1% .125W F TC=0+-100	28480	0757-0123
A10A8R4	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A10A8R5	0698-3132	4	1	RESISTOR 261 1% .125W F TC=0+-100	24546	C4=1/8-T0=2610-F
A10A8R6	0699-0078	3	3	RESISTOR 2.1K .1% .1W F TC=0+-10	28480	0699-0078
A10A8R7	0699-0078	3		RESISTOR 2.1K .1% .1W F TC=0+-10	28480	0699-0078
A10A8R8	0699-0078	3		RESISTOR 2.1K .1% .1W F TC=0+-10	28480	0699-0078
A10A8R9	2100-1739	0	1	RESISTOR-TMR 5K 10% HW SIDE=ADJ 20-TRN	02660	3810P-502
A10A8R10	0699-0082	9	1	RESISTOR 215 .1% .1W F TC=0+-10	28480	0699-0082
A10A8R11	0757-0280	3	9	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A8R12	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A8R13	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A10A8R14	0698-3153	9	2	RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3831-F
A10A8R15	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A8R16	0698-3151	7	1	RESISTOR 2.87K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2871-F
A10A8R17	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A8R18	0698-3445	2	1	RESISTOR 348 1% .125W F TC=0+-100	24546	C4-1/8-T0=348R-F
A10A8R19	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-T0=422R-F
A10A8R20	0757-1094	9	2	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1471-F
A10A8R21	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0=316R-F
A10A8R22	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A8R23	0698-3152	8	1	RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3481-F
A10A8R24	0757-1094	9		RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1471-F
A10A8R25	2100-1972	3	1	RESISTOR-TRMR 20K 10% MM SIDE-ADJ 20-TRN	02660	3810P=203
A10A8R26	0699-0081	8	1	RESISTOR 390K 1% .125W F TC=0+-10	28480	0699-0081
A10A8R27	2100-2851	9	1	RESISTOR-TRMR 2K 10% MM SIDE-ADJ 20-TRN	02660	3810P=202
A10A8R28	0699-0080	7	1	RESISTOR 39K 1% .125W F TC=0+-10	28480	0699-0080
A10A8R29	0698-3499	6	3	RESISTOR 40.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4022-F
A10A8R30	0698-3499	6		RESISTOR 40.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4022-F
A10A8R31	0698-3499	6		RESISTOR 40.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0=4022-F
A10A8R32	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4-1/8-T0=3831-F
A10A8R33	0699-0084	1	1	RESISTOR 6.19K 1% .1W F TC=0+-10	28480	0699-0084
A10A8R34	0699-0083	0	1	RESISTOR 681 1% .1W F TC=0+-10	28480	0699-0083
A10A8R35	0757-0400	9	1	RESISTOR 90.9 1% .125W F TC=0+-100	24546	C4-1/8-T0=909R-F
A10A8R36	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1961-F
A10A8R37	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2151-F
A10A8R38	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A8R39	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A8R40	0699-0079	4	1	RESISTOR 4.667K 1% .1W F TC=0+-10	28480	0699-0079
A10A8R41	2100-1799	2	1	RESISTOR-TRMR 500 10% MM SIDE-ADJ 20-TRN	02660	3810P=501
A10A8R42	0698-8831	0	1	RESISTOR 13.4K 1% .125W F TC=0+-10	28480	0698-8831
A10A8R43	0757-0274	5	1	RESISTOR 1.21K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1213-F
A10A8R44	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2611-F
A10A8R45	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0=2371-F
A10A8R46	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0=1001-F
A10A8R47	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A10A8R48	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0=5111-F
A10A8R49	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A10A8R50	0757-0401	0	2	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0=101-F
A10A8TP1	1251-0600	0	6	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A8TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A8TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A8TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A8TP5				P/O C29		
A10A8TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A8TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A10A8U1	1826-0582	6	2	IC	28480	1826-0582
A10A8U2	1826-0582	6		IC	28480	1826-0582
A10A8U3	1826-0229	8	1	IC OP AMP TO-99	06665	OP-05CJ
A10A8U4	1820-0223	0	2	IC 301 OP AMP TO-99	04713	MLM301AG
A10A8U5	1820-0429	8	1	IC V RGLTR TO-39	18324	LM309M
A10A8U6	1820-1194	6	1	IC CNTR TTL LS BIN UP/DOWN SYNCHRO	01295	SN74LS193N
A10A8U7	1820-1144	6	1	IC GATE TTL LS NOR QUAD 2-INP	01295	SN74LS02N
A10A8U8	1826-0353	9	1	IC 786L15 V RGLTR TO-39	07263	UA78L15ACH
A10A8U9	1820-1196	8	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A10A8U10	1826-0059	2	1	IC 201A OP AMP TO-99	04713	MLM201AG
A10A8U11	1826-0448	3	1	IC-DIGITAL-ANALOG CONV 7520	28480	1826-0448
A10A8U12	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A10A8U13	1820-0223	0		IC 301 OP AMP TO-99	04713	MLM301AG
A10A8VR1	1902-0692	1	1	DIODE-ZNR 6.3V 1% DO-7 PD=.4W TC=+.001%	28480	1902-0692
A10A8W1	85660-60086	0	1	CABLE ASSEMBLY, WHITE/VIOLET (FROM A10A5 (PLL2) VCO TO A10A8J3)	28480	85660-60086
A10A8W2	85660-60071	3	1	CABLE ASSEMBLY, RED (FROM A16 SCAN GENERATOR TO A10A8J1)	28480	85660-60071
	86701-40001	9	1	EXTRACTOR, PC BOARD	28480	86701-40001
	0360-0270	0	1	TERMINAL-SLDR LUG LK-MTG FOR-#10-SCR	28480	0360-0270
	1205-0250	9	1	THERMAL LINK SGL TO-S/T0-39-PKG	28480	1205-0250
	2190-0009	4	1	WASHER-LK INTL T NO. 8 .168-IN-ID	28480	2190-0009
	2190-0124	4	1	WASHER-LK INTL T NO. 10 .195-IN-ID	28480	2190-0124
	2200-0101	0	2	SCREW-WACH 4-40 .188-IN-LG PAN-ND-POZI	00000	ORDER BY DESCRIPTION
	2200-0164	5	1	SCREW-WACH 4-40 .188-IN-LG 82 DEG	00000	ORDER BY DESCRIPTION
	2580-0002	4	1	NUT-HEX-DBL-CHAM 8-32-THD .085-IN-TMK	00000	ORDER BY DESCRIPTION
	2950-0078	9	2	NUT-HEX-DBL-CHAM 10-32-THD .067-IN-TMK	28480	2950-0078
	3050-0021	5	1	WASHER-FL NM NO. 8 .168-IN-ID .375-IN-OD	28480	3050-0021
	3050-0692	6	1	WASHER-FL MTLK NO. 10 .202-IN-ID	28480	3050-0692
	3050-0907	6	1	WASHER-SHLDR NO. 10 .194-IN-ID	28480	3050-0907
	85660-20059	3	1	COVER, PC DISCRIMINATOR	28480	85660-20059
A10A9	85660-60080	4	1	BATTERY PACK ASSEMBLY (INCLUDES A10A9A1 AND A10A9MP1)	28480	85660-60080
A10A9MP1	08672-00011	7	1	BATTERY CLAMP-HOLDER	28480	08672-00011

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A10A9A1				A10A9 MISCELLANEOUS PARTS		
	0363-0067	9	2	CONT-ELEC,,008THK PHOS BRZ	28480	0363-0067
	0624-0289	1	4	SCREW-TPG 2-28 .312-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	8150-0447	6		WIRE 24AWG BK 300V PVC 7X32 80C	28480	8150-0447
	8150-0457	8		WIRE 24AWG W/BK 300V PVC 7X32 80C	28480	8150-0457
	85660-00028	4	1	ADAPTER, PLATE, BATTERY	28480	85660-00028
	08672-60092	0	1	BATTERY	28480	08672-60092

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A11				YTO LOOP ASSEMBLY		
A11C1	0160-3036	8	6	CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-3036
A11C2	0160-3036	8		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-3036
A11C3	0160-4748	1	3	CAPACITOR-FDTHRU 1000PF 20% 200V CER	28480	0160-4748
A11C4	0160-3036	8		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-3036
A11C5	0160-3036	8		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-3036
A11C6	0160-4748	1		CAPACITOR-FDTHRU 1000PF 20% 200V CER	28480	0160-4748
A11C7	0160-3036	8		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-3036
A11C8	0160-4748	1		CAPACITOR-FDTHRU 1000PF 20% 200V CER	28480	0160-4748
A11C9	0160-3036	8		CAPACITOR-FDTHRU 5000PF +80 -20% 200V	28480	0160-3036
A11J1	1250-0691	7	5	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0691
A11J2	1250-0691	7		CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0691
A11J3	1250-0691	7		CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0691
A11J4	1250-0691	7		CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0691
A11J5	1250-0691	7		CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	28480	1250-0691
A11U1	5086-7292	3	1	SAMPLER, 2-6.0 GMZ	28480	5086-7292
A11W1	85660-20086	6	1	CABLE, A11A3 YTO TO A11A1 COUPLER	28480	85660-20086
A11W2	86701-20031	3	1	CABLE, A11A6 ATTENUATOR TO A11A5 SAMPLER	28480	86701-20031
A11W3	85660-20087	7	1	CABLE, A11A1 COUPLER TO A11A7 FILTER	28480	85660-20087
A11W4	85660-60081	5	1	CABLE ASSEMBLY, BLACK(A11A5 TO A11A4)	28480	85660-60081
				A11 MISCELLANEOUS PARTS		
	85660-20100	5	2	EXTRACTOR, PC BOARD	28480	85660-20100
A11A1	5086-7295	6	1	COUPLER/ISOLATOR/AMPLIFIER (CIA)	28480	5086-7295
A11A2	85660-60123	6	1	BOARD ASSEMBLY, INTERCONNECT, YTO LOOP (MUST BE USED WITH A11A3 5086-7314)	28480	85660-60123
A11A2C1	0180-0374	3	1	CAPACITOR-FXD 10UF+-10% 20VDC TA	56289	150D106X9020B2
A11A2C2	0160-3879	7	1	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A11A2L1	9100-2262	3	1	COIL-MLD 3.9UH 10% Q=45 .095DX.25LG-NOM	28480	9100-2262
A11A2R1	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1001-F
A11A2R2	2100-1775	4	1	RESISTOR-TRMR 5K 5% WW TOP-ADJ 1-TRN	28480	2100-1775
A11A2W1	8120-2801	7	1	CABLE, RIBBON, 14-COND.	28480	8120-2801
A11A2W2	8120-2803	9	1	CABLE, RIBBON, 20-COND.	28480	8120-2803
A11A2W3	85660-60108	7	1	CABLE ASSEMBLY, +5V (92 WIRE)	28480	85660-60108
A11A2W4	85660-60109	8	1	CABLE ASSEMBLY, GATE BIAS (96 WIRE)	28480	85660-60109
A11A3 (NEW)	5086-7314	0	1	YIG-TUNED OSCILLATOR (YTO)	28480	5086-7314
A11A3 (RESTORED)	5086-6314	8		YIG-TUNED OSCILLATOR (YTO) (RESTORED 5086-7314)	28480	5086-6314

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1144	85660-60031	5	1	BOARD ASSEMBLY, YIG-TUNED OSCILLATOR (YTO) DETECTOR	28480	85660-60031
A1144C1	0160-3787	6	1	CAPACITOR-FXD 1UF +-10% 50VDC MET-POLYC	28480	0160-3787
A1144C2	0160-0116	1	1	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D65X9035B2
A1144C3	0160-0197	8	2	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A1144C4	0160-2307	4	2	CAPACITOR-FXD 47PF +-5% 300VDC MICA	28480	0160-2307
A1144C5	0160-2307	4	2	CAPACITOR-FXD 47PF +-5% 300VDC MICA	28480	0160-2307
A1144C6	0160-2200	6	1	CAPACITOR-FXD 43PF +-5% 300VDC MICA	28480	0160-2200
A1144C7	0160-2264	2	1	CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A1144C8	0160-0574	3	4	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A1144C9	0160-3879	7	2	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A1144C10				NOT ASSIGNED		
A1144C11	0160-3538	5	2	CAPACITOR-FXD 750PF +-5% 100VDC MICA	28480	0160-3538
A1144C12	0160-0165	8	1	CAPACITOR-FXD .056UF +-10% 200VDC POLYE	28480	0160-0165
A1144C13	0160-2055	9	4	CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1144C14	0160-3874	2	2	CAPACITOR-FXD 10PF +-5% 200VDC CER	28480	0160-3874
A1144C15	0160-2055	9	4	CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1144C16	0160-2453	1	1	CAPACITOR-FXD .22UF +-10% 80VDC POLYE	28480	0160-2453
A1144C17	0160-2055	9	4	CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1144C18	0160-2055	9	4	CAPACITOR-FXD .01UF +-80-20% 100VDC CER	28480	0160-2055
A1144C19	0160-3874	2	2	CAPACITOR-FXD 10PF +-5% 200VDC CER	28480	0160-3874
A1144C20	0160-3661	5	1	CAPACITOR-FXD .1UF +-5% 50VDC MET-POLYC	28480	0160-3661
A1144C21	0160-0574	3	4	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A1144C22				NOT ASSIGNED		
A1144C23	0160-3538	5	2	CAPACITOR-FXD 750PF +-5% 100VDC MICA	28480	0160-3538
A1144C24				NOT ASSIGNED		
A1144C25	0160-0574	3	4	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A1144C26	0160-3879	7	2	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A1144C27	0160-0574	3	4	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A1144C28	0160-0197	8	2	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A1144CR1	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1144CR2	1901-0050	3	2	DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A1144CR3	1901-0050	3	2	DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A1144CR4	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1144CR5	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1144CR6	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1144CR7	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A1144L1	9100-1620	5	3	COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A1144L2	9100-1641	0	2	COIL-MLD 240UH 5% Q=65 .155DX,375LG-NOM	28480	9100-1641
A1144L3	9100-1641	0	2	COIL-MLD 240UH 5% Q=65 .155DX,375LG-NOM	28480	9100-1641
A1144L4	9100-0368	6	2	COIL-MLD 330NH 10% Q=28 .095DX,25LG-NOM	28480	9100-0368
A1144L5	9100-2254	3	2	COIL-MLD 390NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2254
A1144L6	9100-2254	3	2	COIL-MLD 390NH 10% Q=35 .095DX,25LG-NOM	28480	9100-2254
A1144L7	9100-0368	6	2	COIL-MLD 330NH 10% Q=28 .095DX,25LG-NOM	28480	9100-0368
A1144L8	9100-1620	5	3	COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A1144L9	9100-1620	5	3	COIL-MLD 15UH 10% Q=65 .155DX,375LG-NOM	28480	9100-1620
A1144G1	1855-0395	0	1	TRANSISTOR J-FET N-CHAN D-MODE SI	17856	FN2645
A1144G2	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MH	28480	1854-0404
A1144G3	1853-0050	0	1	TRANSISTOR PNP SI TO-18 PD=360MH	28480	1853-0050
A1144G4	1854-0475	5	1	TRANSISTOR-DUAL NPN PD=750MH	28480	1854-0475
A1144R1	0698-7212	9	3	RESISTOR 100 1% .05W F TC=0+-100	24546	C3-1/8-T0-100R-G
A1144R2	0698-7212	9	3	RESISTOR 100 1% .05W F TC=0+-100	24546	C3-1/8-T0-100R-G
A1144R3	0698-7219	6	2	RESISTOR 196 1% .05W F TC=0+-100	24546	C3-1/8-T0-196R-G
A1144R4	0698-7219	6	2	RESISTOR 196 1% .05W F TC=0+-100	24546	C3-1/8-T0-196R-G
A1144R5	0698-7212	9	3	RESISTOR 100 1% .05W F TC=0+-100	24546	C3-1/8-T0-100R-G
A1144R6	0698-3132	4	2	RESISTOR 261 1% .125W F TC=0+-100	24546	C4-1/8-T0-2610-F
A1144R7	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A1144R8	0757-0280	3	2	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A1144R9	0757-0280	3	2	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A1144R10	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A1144R11	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A1144R12	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A1144R13	0698-7288	9	1	RESISTOR 147K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1473-G
A1144R14	0757-0418	9	1	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A1144R15	0757-0438	3	2	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A1144R16	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A1144R17	0698-3440	7	2	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A1144R18	0698-3132	4	2	RESISTOR 261 1% .125W F TC=0+-100	24546	C4-1/8-T0-2610-F
A1144R19	0757-0442	9	7	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A1144R20	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A114R21	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1471-F
A114R22	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A114R23	0698-3429	2	2	RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A114R24	0698-3445	2	1	RESISTOR 348 1% .125W F TC=0+-100	24546	C4-1/8-T0-348R-F
A114R25	0698-3152	8	1	RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3481-F
A114R26	0698-3429	2		RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0-19R6-F
A114R27	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A114R28	0757-0458	7	1	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A114R29	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1962-F
A114R30	0698-3155	1	1	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4641-F
A114R31	0757-0416	7	2	RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A114R32	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A114R33	0698-4020	1	1	RESISTOR 9.53K 1% .125W F TC=0+-100	24546	C4-1/8-T0-9531-F
A114R34	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2611-F
A114R35	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A114R36	0698-3136	8	1	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A114R37	0757-0279	0	1	RESISTOR 3.16K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3161-F
A114R38				NOT ASSIGNED		
A114R42				RESISTOR 825 1% .125W F TC=0+-100	24546	C4-1/8-T0-825R-F
A114R43	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4-1/8-T0-825R-F
A114R52				NOT ASSIGNED		
A114R53	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A114R54	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A114TP1	1251-0600	0	4	CONNECTOR-SGL CONT PIN 1.14-MM-83C-8Z 3Q	28480	1251-0600
A114TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-83C-8Z 3Q	28480	1251-0600
A114TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-83C-8Z 3Q	28480	1251-0600
A114TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-83C-8Z 3Q	28480	1251-0600
A114U1	1826-0422	3	1	IC T0-99	27014	LF298M
A114U2	1826-0092	3	1	IC OP AMP T0-99	28480	1826-0092
A114U3	1826-1344	8	1	IC PL LOOP 14-DIP-C	04713	MC12040L
A114U4	1826-0802	1	1	IC GATE ECL NOR QUAD 2-INP	04713	MC10102P
A114U5	1826-0044	5	1	IC OP AMP 14-DIP-C	07263	739DC
A114U6	1820-0817	8	2	IC FF ECL D-M/S DUAL	04713	MC10131P
A114U7	1810-0204	6	1	NETWORK-RES 8-PIN-SIP .1-PIN-8PCG	11236	750-81-R1K
A114U8	1820-0817	8		IC FF ECL D-M/S DUAL	04713	MC10131P
A114VR1	1902-1260	1	2	DIODE-ZNR 1N5525C 6.2V 2% DO-7 PD=.4W	04713	1N5525C
A114VR2	1902-1260	1		DIODE-ZNR 1N5525C 6.2V 2% DO-7 PD=.4W	04713	1N5525C
A114VR3				NOT ASSIGNED		
A114VR4	1902-3082	9	1	DIODE-ZNR 4.64V 5% DO-7 PD=.4W TC=-.023%	28480	1902-3082

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A11A5	85660-60032	6	1	BOARD ASSEMBLY, SAMPLER	28480	85660-60032
A11A5C1	0121-0046	2	2	CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304322 9/35PF N650
A11A5C2	0121-0046	2		CAPACITOR-V TRMR-CER 9-35PF 200V PC-MTG	52763	304322 9/35PF N650
A11A5C3	0180-0197	8	2	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	1500225X9020A2
A11A5C4	0180-0116	1	1	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	1500685X9035B2
A11A5C5	0160-2055	9	11	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C6	0160-2150	5	1	CAPACITOR-FXD 33PF +-5% 300VDC MICA	28480	0160-2150
A11A5C7	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C8	0160-3878	6	3	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A11A5C9	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	1500225X9020A2
A11A5C10	0160-2264	2	1	CAPACITOR-FXD 20PF +-5% 500VDC CER 0+-30	28480	0160-2264
A11A5C11	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A11A5C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C13	0180-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	1500226X9015B2
A11A5C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C15	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C16	0160-3879	7	5	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A11A5C17	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C18	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A11A5C19	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A11A5C20	0160-0939	4	1	CAPACITOR-FXD 430PF +-5% 300VDC MICA	28480	0160-0939
A11A5C21	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C22	0160-2205	1	1	CAPACITOR-FXD 120PF +-5% 300VDC MICA	28480	0160-2205
A11A5C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C24	0140-0193	0	2	CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300WV1CR
A11A5C25	0140-0193	0		CAPACITOR-FXD 82PF +-5% 300VDC MICA	72136	DM15E820J0300WV1CR
A11A5C26	0160-2308	5	1	CAPACITOR-FXD 36PF +-5% 300VDC MICA	28480	0160-2308
A11A5C27	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C28	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C29	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A11A5C30	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A11A5C31	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A11A5C32	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A11A5L1				NOT ASSIGNED		
A11A5L2	9140-0144	0	1	COIL-MLD 4.7UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0144
A11A5L3	9100-1623	8	1	COIL-MLD 27UH 5% Q=60 .155DX,375LG-NOM	28480	9100-1623
A11A5L4	9100-2251	0	1	COIL-MLD 220NH 10% Q=32 .095DX,25LG-NOM	28480	9100-2251
A11A5L5	9100-2258	7	2	COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A11A5L6	9100-2258	7		COIL-MLD 1.2UH 10% Q=32 .095DX,25LG-NOM	28480	9100-2258
A11A5L7	9100-0346	0	1	COIL-MLD 50NH 20% Q=40 .095DX,25LG-NOM	28480	9100-0346
A11A5L8				NOT ASSIGNED		
A11A5L9				NOT ASSIGNED		
A11A5L10	9140-0143	9	1	COIL-MLD 3.3UH 10% Q=45 .095DX,25LG-NOM	28480	9140-0143
A11A5L11	9100-0368	6	1	COIL-MLD 330NH 10% Q=28 .095DX,25LG-NOM	28480	9100-0368
A11A5L12	9100-2249	6	2	COIL-MLD 150NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2249
A11A5L13	9100-2250	9	1	COIL-MLD 180NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2250
A11A5L14	9100-2249	6		COIL-MLD 150NH 10% Q=34 .095DX,25LG-NOM	28480	9100-2249
A11A5Q1	1854-0247	9	3	TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A11A5Q2	1854-0345	8	3	TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A11A5Q3	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A11A5Q4	1855-0254	0	1	TRANSISTOR-MOSFET DUAL N-CHAN E-MODE	28480	1855-0254
A11A5Q5	1853-0015	7	1	TRANSISTOR PNP SI PD=200MW FT=500MHZ	28480	1853-0015
A11A5Q6	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A11A5Q7	1854-0345	8		TRANSISTOR NPN 2N5179 SI TO-72 PD=200MW	04713	2N5179
A11A5Q8	1854-0247	9		TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A11A5R1	2100-3383	4	1	RESISTOR-TRMR 50 10% C TOP=ADJ 1-TRN	28480	2100-3383
A11A5R2	0757-0394	0	5	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A11A5R3	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4=1/8-T0=196R-F
A11A5R4	0698-0085	0	1	RESISTOR 2.61K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2611-F
A11A5R5	0757-0424	7	1	RESISTOR 1.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1101-F
A11A5R6	0757-0280	3	3	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A11A5R7	0757-0278	9	1	RESISTOR 1.78K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1781-F
A11A5R8	0757-0796	6	1	RESISTOR 82.5 1% .5W F TC=0+-100	28480	0757-0796
A11A5R9	0757-0399	5	1	RESISTOR 82.5 1% .125W F TC=0+-100	24546	C4=1/8-T0=82R5-F
A11A5R10	0698-3457	6	1	RESISTOR 316K 1% .125W F TC=0+-100	28480	0698-3457
A11A5R11	0757-0470	3	1	RESISTOR 162K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1623-F
A11A5R12	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A11A5R13	0698-7216	3	1	RESISTOR 147 1% .05W F TC=0+-100	24546	C3=1/8-T0=147R-G
A11A5R14	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1622-F
A11A5R15	0757-0317	7	1	RESISTOR 1.33K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1331-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A11ASR16	0757-0398	4	1	RESISTOR 75 1% .125W F TC=0+-100	24546	C4-1/8-T0-75R0-F
A11ASR17	0757-0422	5	1	RESISTOR 909 1% .125W F TC=0+-100	24546	C4-1/8-T0-909R-F
A11ASR18	0757-0420	3	2	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A11ASR19	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4-1/8-T0-825R-F
A11ASR20	0698-7224	3	1	RESISTOR 316 1% .05W F TC=0+-100	24546	C3-1/8-T0-316R-G
A11ASR21	0698-7212	9	2	RESISTOR 100 1% .05W F TC=0+-100	24546	C3-1/8-T0-100R-G
A11ASR22	0698-7197	9	1	RESISTOR 23.7 1% .05W F TC=0+-100	24546	C3-1/8-T0-237R-G
A11ASR23	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A11ASR24	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A11ASR25	0698-0082	7	2	RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0-4640-F
A11ASR26	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A11ASR27	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R1-F
A11ASR28	0698-0082	7		RESISTOR 464 1% .125W F TC=0+-100	24546	C4-1/8-T0-4640-F
A11ASR29	0698-7212	9		RESISTOR 100 1% .05W F TC=0+-100	24546	C3-1/8-T0-100R-G
A11ASR30	0757-0346	2	2	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A11ASR31	0757-0420	3		RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A11ASR32	0698-3439	4	2	RESISTOR 178 1% .125W F TC=0+-100	24546	C4-1/8-T0-178R-F
A11ASR33	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A11ASR34	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A11ASR35	0698-3439	4		RESISTOR 178 1% .125W F TC=0+-100	24546	C4-1/8-T0-178R-F
A11ASR36	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R1-F
A11ASR37	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R1-F
A11ASR38	0757-0276	7	2	RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-6192-F
A11ASR39	0757-0276	7		RESISTOR 61.9 1% .125W F TC=0+-100	24546	C4-1/8-T0-6192-F
A11ASR40	0757-0394	0		RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R1-F
A11ASR41	0698-7196	8	1	RESISTOR 21.5 1% .05W F TC=0+-100	24546	C3-1/8-T0-215R-G
A11ASTP1	1251-0600	0	1	CONNECTOR-SGL CONT PIN 1,14-MM-B9C-8Z SQ	28480	1251-0600
A11A6	0955-0122	2	1	ATTENUATOR, COAXIAL	28480	0955-0122
A11A7	9135-0040	4	1	LOW-PASS FILTER, 6.2 GHz	28480	9135-0400

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A12	85660-60035	9	1	BOARD ASSEMBLY, FRONT PANEL INTERFACE	28480	85660-60035
A12C1	0180-0197	8	3	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A12C2	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A12C3	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A12C4	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A12C5	0160-0127	2	1	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A12C6	0180-0373	2	1	CAPACITOR-FXD .68UF+-10% 35VDC TA	56289	150D684X9035A2
A12C7	0160-3879	7	1	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A12C8	0160-3878	6	2	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A12C9	0160-3878	6		CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A12C10	0160-0571	0	1	CAPACITOR-FXD 470PF +-20% 100VDC CER	28480	0160-0571
A12L1	08558-80011	6	1	FILTER, COIL, BLUE	28480	08558-80011
A12Q1	1854-0404	0	3	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A12Q2	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A12Q3	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A12R1	0698-7281	2	1	RESISTOR 75K 2% .05W F TC=0+-100	24546	C3=1/8-T0-7502-G
A12R2	0698-7268	5	2	RESISTOR 21.5K 1% .05W F TC=0+-100	24546	C3=1/8-T0-2152-G
A12R3	0698-7251	6	1	RESISTOR 4.22K 1% .05W F TC=0+-100	24546	C3=1/8-T0-4221-G
A12R4	0698-7272	1	1	RESISTOR 31.6K 1% .05W F TC=0+-100	24546	C3=1/8-T0-3162-G
A12R5	0698-7260	7	5	RESISTOR 10K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1002-G
A12R6	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1002-G
A12R7	0698-7268	5		RESISTOR 21.5K 1% .05W F TC=0+-100	24546	C3=1/8-T0-2152-G
A12R8	0757-0442	9	9	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R9	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R10	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R11	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R12	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R13	0698-7243	6	8	RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R14	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R15	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R16	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R17	0698-7236	7	2	RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1001-G
A12R18	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R19	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R20	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R21	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1002-G
A12R22	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1002-G
A12R23	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R24	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1002-G
A12R25	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R26	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R27	0698-0083	8	2	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A12R28	0698-3454	3	1	RESISTOR 215K 1% .125W F TC=0+-100	24546	C4=1/8-T0-2153-F
A12R29	0698-7243	6		RESISTOR 1.96K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1961-G
A12R30	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1961-F
A12R31	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1002-F
A12R32	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0-1001-G
A12TP1	1251-5177	6	3	CONNECTOR-SGL CONT PIN .031-IN-BSC-8Z	28480	1251-5177
A12TP2	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-8Z	28480	1251-5177
A12TP3	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-8Z	28480	1251-5177
A12U1	1820-1491	6	3	IC BFR TTL LS NON-INV HEX 1-INP	01295	8N74LS367N
A12U2	1820-1196	8	6	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74LS174N
A12U3	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74LS174N
A12U4	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	8N74LS367N
A12U5	1810-0206	8	2	NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R10K
A12U6	1820-1207	2	1	IC GATE TTL LS NAND 8-INP	01295	8N74LS30N
A12U7	1820-1207	7	1	IC GATE TTL LS NAND TPL 3-INP	01295	8N74LS10N
A12U8				P/O A6A2-NOT SEPARATELY REPLACEABLE (ORDER HP PART NO. 85660-00121)		
A12U9	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	8N74LS174N
A12U10	1820-1216	3	3	IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	8N74LS138N
A12U11	1820-1112	8	3	IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	8N74LS174N
A12U12	1820-1492	7	1	IC BFR TTL LS INV HEX 1-INP	01295	8N74LS368N
A12U13	1820-1216	3		IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	8N74LS138N
A12U14	1820-1112	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	8N74LS174N
A12U15	1820-1199	1	2	IC INV TTL LS HEX 1-INP	01295	8N74LS04N
A12U16	1820-1112	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	8N74LS174N
A12U17	1820-1199	1		IC INV TTL LS HEX 1-INP	01295	8N74LS04N
A12U18	1820-1291	4	2	IC CNTR TTL BIN SYNCHRO 4-BIT	27014	DM8554N
A12U19	1820-1291	4		IC CNTR TTL BIN SYNCHRO 4-BIT	27014	DM8554N

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A12U20	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A12U21	1820-1491	6		IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A12U22	1826-0161	7	1	IC 324 OP AMP 14-DIP-P	18324	LM324-A
A12U23	1820-1425	6	1	IC SCHMITT-TRIG TTL LS NAND QUAD 2-INP	01295	SN74LS132N
A12U24	1820-0987	3	1	IC ENCDR TTL L 8-INP	07263	93L18PC
A12U25	1820-1440	5	1	IC LCM TTL LS QUAD	01295	SN74LS279N
A12U26	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A12U27	1820-1211	8	1	IC GATE TTL LS EXCL-OR QUAD 2-INP	01295	SN74LS86N
A12U28	1826-0180	0	1	IC TIMER TTL MONO/ASTBL	18324	NE555V
A12U29	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A12U30	1820-1210	7	2	IC GATE TTL LS AND-OR-INV DUAL 2-INP	01295	SN74LS51N
A12U31	1810-0206	8		NETWORK-RES 8-PIN-SIP .1-PIN-SPCG	11236	750-81-R10K
A12U32	1820-1210	7		IC GATE TTL LS AND-OR-INV DUAL 2-INP	01295	SN74LS51N
A12U33	1820-1216	3		IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	SN74LS138N
A12XU8	1200-0812	9	1		28480	1200-0812
				A12 MISCELLANEOUS PARTS		
	1480-0073	6	2	PIN-HOLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0749	4	1	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749
	4040-0750	7	1	EXTRACTOR-PC BOARD RED POLYC	28480	4040-0750
	1460-1489	8	4	WIREFORM BE CU AG	28480	1460-1489

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A1J	85660-60042	8	1	BOARD ASSEMBLY, HP-IB INTERFACE	28480	85660-60042
A13C1	0180-0229	7	4	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A13C2	0160-2055	9	13	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C3	0180-0229	7		CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A13C4	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C5	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C6	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C7				NOT ASSIGNED		
A13C8	0180-0229	7		CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A13C9	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C11	0180-0229	7		CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A13C12	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C13	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C15	0180-0116	1	1	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X903582
A13C16	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C17	0160-4298	6	1	CAPACITOR-FXD 4700PF +-20% 250VDC CER	56289	C067F251M472M922-COM
A13C18	0180-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X901582
A13C19	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C20	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13C21				NOT ASSIGNED		
A13C22*	0160-0945	2	1	CAPACITOR-FXD 910PF +-5% 100VDC MICA	28480	0160-0945
A13C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A13CR1-				NOT ASSIGNED		
A13CR4				NOT ASSIGNED		
A13CR5	1901-0040	1	1	DIODE-SMITHING 30V 50MA 2NS DO-35	28480	1901-0040
A13CR6	1901-0518	8	2	DIODE-SCHOTTKY	28480	1901-0518
A13CR7				NOT ASSIGNED		
A13CR8	1901-0518	8		DIODE-SCHOTTKY	28480	1901-0518
A13E1	1251-4832	8	1	PROGRAMMING JUMPER	28480	1251-4832
A13J1	1251-3283	1	1	CONNECTOR 24-PIN F MICRORIBBON	28480	1251-3283
A13J2	1200-0655	8	3	SOCKET-IC 18-CONT DIP DIP-SLDR (FOR E1)	28480	1200-0655
A13L1	08558-80011	6	3	FILTER, COIL, BLUE	28480	08558-80011
A13L2	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A13L3	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A13Q1	1854-0477	7	4	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A13Q2	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A13Q3	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A13Q4	1854-0477	7		TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A13R1				NOT ASSIGNED		
A13R2				NOT ASSIGNED		
A13R3	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A13R4	0757-0420	3	1	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A13R5	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A13R6	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1621-F
A13R7*				FACTORY SELECTED COMPONENT (SEE SECTION V)		
A13R8				NOT ASSIGNED		
A13R9	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1962-F
A13R10	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A13R11				NOT ASSIGNED		
A13R12				NOT ASSIGNED		
A13R13	0698-3334	8	1	RESISTOR 178 1% .5W F TC=0+-100	28480	0698-3334
A13R14	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A13R15	0757-0438	3	2	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A13R16	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A13R17	0757-0417	8	1	RESISTOR 562 1% .125W F TC=0+-100	24546	C4-1/8-T0-562M-F
A13R18	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A13R19	0757-0418	9	1	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A13R20	0698-3159	5		RESISTOR 26.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2612-F
A13S1	3101-2206	1	1	SWITCH-TGL DIP-RKR-ASSY 5-1A .5A 30VDC	28480	3101-2206
A13TP1-				NOT ASSIGNED		
A13TP10				CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP11	1251-5177	6	9	CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP12	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP13	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A13TP14	1460-1489	8	2	WIREFORM BE CU AG	28480	1460-1489
A13TP15	1460-1489	8		WIREFORM BE CU AG	28480	1460-1489
A13TP16	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP17				NOT ASSIGNED		
A13TP18				NOT ASSIGNED		
A13TP19	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP20				NOT ASSIGNED		
A13TP21	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP22=				NOT ASSIGNED		
A13TP23				NOT ASSIGNED		
A13TP24	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP25=				NOT ASSIGNED		
A13TP27				NOT ASSIGNED		
A13TP28	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13TP29	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A13U1	1820-1201	6	1	IC GATE TTL LS AND QUAD 2-INP	01295	SN74LS00N
A13U2	1820-1216	3	2	IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	SN74LS138N
A13U3	1820-1491	6	1	IC BFR TTL LS NON-INV HEX 1-INP	01295	SN74LS367N
A13U4	1820-1197	9	1	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS00N
A13U5	1820-1112	8	3	IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS74N
A13U6	1820-1558	6	3	IC MISC TTL* QUAD	04713	MC3441P
A13U7	1820-1691	8	1	IC MICPROC MOS	28480	1820-1691
A13U8	1816-1235	7	2	IC TTL 8192-BIT PROM	28480	1816-1235
A13U9	1816-1236	8	5	IC TTL 8192-BIT PROM	28480	1816-1236
A13U10	1820-1416	5	1	IC SCHMITT-TRIG TTL LS INV HEX 1-INP	01295	SN74LS14N
A13U11	1820-1199	1	1	IC INV TTL LS HEX 1-INP	01295	SN74LS04N
A13U12	1820-1558	6		IC MISC TTL* QUAD	04713	MC3441P
A13U13	1820-1730	6	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS273N
A13U14	1810-0326	3	1	NETWORK-RO 10 PIN SIP; 0.1 IN SPACING	28480	1810-0326
A13U15	1820-1917	1	2	IC BFR TTL LS LINE DRVR OCTL	01295	SN74LS240N
A13U16	1820-1558	6		IC MISC TTL* QUAD	04713	MC3441P
A13U17	1820-1730	6		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS273N
A13U18	1820-1917	1		IC BFR TTL LS LINE DRVR OCTL	01295	SN74LS240N
A13U19	1820-1423	4	1	IC MV TTL LS MONOSTBL RETRIG DUAL	01295	SN74LS123N
A13U20	1820-1522	4	1	IC MISC TTL* QUAD	04713	MC3440P
A13U21	1820-1997	7	2	IC FF TTL LS D-TYPE POS-EDGE-TRIG PRL-IN	34335	SN74LS374PC
A13U22	1820-1997	7		IC FF TTL LS D-TYPE POS-EDGE-TRIG PRL-IN	34335	SN74LS374PC
A13U23	1820-1216	3		IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	SN74LS138N
A13U24	1820-1112	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS74N
A13U25	1820-1112	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS74N
A13VR1	1902-3158	0	1	DIODE-ZNR 9.76V 2% DO-7 PD=.4W TC=+.059%	28480	1902-3158
A13XU7	1200-0694	5	1	SOCKET-IC 40-CONT DIP DIP-SLDR	28480	1200-0694
A13XU11	1200-0655	8	1	SOCKET-IC 18-CONT DIP DIP-SLDR	28480	1200-0655
A13 MISCELLANEOUS PARTS						
	85680-60115	0	2	STANDOFF ASSEMBLY, METRIC (USED ON J1)	28480	85680-60115
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0749	4	1	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749
	4040-0751	8	1	EXTRACTOR-PC BOARD ORN POLYC	28480	4040-0751
	1530-1098	4	2	CLEVIS 0.070-IN W SLT; 0.454-IN PIN CTR	00000	ORDER BY DESCRIPTION
	2190-0004	9	2	WASHER-LK INTL T NO. 6 .115-IN-ID	28480	2190-0004
	2190-0034	5	2	WASHER-LK MLCL NO. 10 .194-IN-ID	28480	2190-0034
	2200-0143	0	2	SCREW-MACH 4-40 .375-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2260-0002	6	2	NUT-HEX-DBL-CHAM 4-40-TMD .062-IN-THK	00000	ORDER BY DESCRIPTION

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A14	85660-60110	1	1	BOARD ASSEMBLY, MEMORY	28480	85660-60110
A14C1	0160-4084	8	1	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A14C2	0180-0229	7	2	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A14C3	0160-3879	7	15	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C4	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C5	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C6	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C7	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C8	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C9	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C10	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C11	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C12	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C13	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C14	0180-0229	7		CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X901082
A14C15	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C16	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C17	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14C18	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A14CR1	1901-0050	3	3	DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A14CR2	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A14CR3	1901-0535	9	1	DIODE-SCHOTTKY	28480	1901-0535
A14CR4	1901-0050	3		DIODE-SWITCHING 80V 200MA 2NS DO-35	28480	1901-0050
A14CR5	1901-0200	5	1	DIODE-PWR RECT 100V 1.5A	28480	1901-0200
A14L1	08558-80011	6	1	FILTER, COIL, BLUE	28480	08558-80011
A14R1	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A14R2	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R-F
A14R3	0698-0083	8	3	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A14R4	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A14R5	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A14TP1	1251-5177	6	12	CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP2	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP3	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP4	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP5	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP6	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP7	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP8	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP9	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP10	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP11	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14TP12	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-B3C-8Z	28480	1251-5177
A14U1	1818-0856	0	16	IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0856
A14U2	1818-0857	1		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0857
A14U3	1818-0858	2		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0858
A14U4	1818-0859	3		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0859
A14U5	1818-0860	6		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0860
A14U6	1818-0861	7		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0861
A14U7	1818-0862	8		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0862
A14U8	1818-0863	9		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0863
A14U9	1820-1195	7	4	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A14U10	1820-1195	7		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A14U11	1820-2024	3	2	IC DRVR TTL LS LINE DRVR OCTL	01295	SN74LS244N
A14U12	1820-1446	1	1	IC SHF-RGTR TTL LS R-8 PRL-IN PRL-OUT	01295	SN74LS395N
A14U13	1818-0390	7	16	IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U14	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U15	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U16	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U17	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U18	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U19	1820-1195	7		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A14U20	1820-1195	7		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A14U21	1820-2024	3		IC DRVR TTL LS LINE DRVR OCTL	01295	SN74LS244N
A14U22	1820-1197	9	2	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS300N
A14U23	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U24	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U25	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U26	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U27	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U28	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-8	32293	IM65081DE
A14U29	1818-0864	0		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0864
A14U30	1818-0865	1		IC NMOS 16384-BIT PROM 450-NS 3-8	28480	1818-0865

See introduction to this section for ordering information
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Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A14U31	1818-0866	2		IC NMOS 16384-BIT PROM 450-NS 3-S	28480	1818-0866
A14U32	1818-0867	3		IC NMOS 16384-BIT PROM 450-NS 3-S	28480	1818-0867
A14U33	1818-0868	4		IC NMOS 16384-BIT PROM 450-NS 3-S	28480	1818-0868
A14U34	1818-0869	5		IC NMOS 16384-BIT PROM 450-NS 3-S	28480	1818-0869
A14U35	1818-0870	8		IC NMOS 16384-BIT PROM 450-NS 3-S	28480	1818-0870
A14U36	1818-0871	9		IC NMOS 16384-BIT PROM 450-NS 3-S	28480	1818-0871
A14U37	1820-1216	3	1	IC DCDR TTL LS 3-TO-8-LINE 3-INP	01295	3N74LS138N
A14U38	1820-1197	9		IC GATE TTL LS NAND QUAD 2-INP	01295	3N74LS00N
A14U39	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-S	32293	IM6508IDE
A14U40	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-S	32293	IM6508IDE
A14U41	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-S	32293	IM6508IDE
A14U42	1818-0390	7		IC CMOS 1K RAM STAT 460-NS 3-S	32293	IM6508IDE
A14VR1	1902-0041	4	1	DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	28480	1902-0041
				A14 MISCELLANEOUS PARTS		
	4040-0749	4	1	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749
	4040-0752	9	1	EXTRACTOR-PC BOARD YEL POLYC	28480	4040-0752
	1480-0073	6	1	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	1200-0812	9	1	SOCKET, DIL 16-CONT	28480	1200-0812

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A15	85660-60132	7	1	BOARD ASSEMBLY, PROCESSOR	28480	85660-60132
A15C1	0160-4084	8	13	CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C2	0180-0197	8	4	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A15C3	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C4	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C5	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A15C6	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A15C7	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C8	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A15C9	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C10	0160-2202	8	1	CAPACITOR-FXD 75PF +-5% 300VDC MICA	28480	0160-2202
A15C11	0140-0197	4	2	CAPACITOR-FXD 180PF +-5% 300VDC MICA	72136	DM15F181J0300MV1CR
A15C12	0140-0197	4		CAPACITOR-FXD 180PF +-5% 300VDC MICA	72136	DM15F181J0300MV1CR
A15C13	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C14	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C15	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C16	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C17	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C18	0160-2214	4	1	CAPACITOR-FXD 90UF+-10% 16VDC AL	56289	30D906G016CC2
A15C19	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C20	0160-3879	7	1	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A15C21	0160-2209	5	1	CAPACITOR-FXD 360PF +-5% 300VDC MICA	28480	0160-2209
A15C22	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C23	0160-0127	2	2	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A15C24	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A15C25	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A15CR1	1901-0535	9	7	DIODE-SCHOTTKY	28480	1901-0535
A15CR2	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A15CR3	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A15CR4	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A15CR5	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A15CR6	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A15CR7	1901-0535	9		DIODE-SCHOTTKY	28480	1901-0535
A15J1	1251-4222	0	1	CONNECTOR 50-PIN F MICRO RIBBON	28480	1251-4222
A15L1	08558-80011	6	3	FILTER, COIL, BLUE	28480	08558-80011
A15L2	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A15L3	08558-80011	6		FILTER, COIL, BLUE	28480	08558-80011
A15Q1	1853-0007	7	1	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A15Q2	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A15Q3	1854-0637	1	1	TRANSISTOR NPN 2N2219A SI TO-5 PD=800MW	28480	1854-0637
A15R1	0698-7225	4	5	RESISTOR 348 1% .05W F TC=0+-100	24546	C3-1/8-T0-348R-G
A15R2	0698-3601	2	1	RESISTOR 10.5K 2W MO TC=0+-200	27167	FP42-2-T00-10R0-J
A15R3	0698-7260	7	7	RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1002-G
A15R4	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1002-G
A15R5	0757-0199	3	1	RESISTOR 21.5K 1% .125W F TC=0+-100	03292	C4-1/8-T0-2152-F
A15R6	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1002-G
A15R7	0757-0442	9	5	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A15R8	0698-7264	1	2	RESISTOR 14.7K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1472-G
A15R9	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1002-G
A15R10	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A15R11	0698-3437	2	1	RESISTOR 133 1% .125W F TC=0+-100	24546	C4-1/8-T0-133R-F
A15R12	0698-7264	1		RESISTOR 14.7K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1472-G
A15R13	0698-7268	5	2	RESISTOR 21.5K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2152-G
A15R14	0698-7236	7	10	RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A15R15	0698-7225	4		RESISTOR 348 1% .05W F TC=0+-100	24546	C3-1/8-T0-348R-G
A15R16	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A15R17	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A15R18	0698-7225	4		RESISTOR 348 1% .05W F TC=0+-100	24546	C3-1/8-T0-348R-G
A15R19	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A15R20	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A15R21	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1002-G
A15R22	0698-7239	0	1	RESISTOR 1.33K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1331-G
A15R23	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1002-G
A15R24	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A15R25	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3-1/8-T0-1001-G
A15R26	0698-7193	5	2	RESISTOR 16.2 1% .05W F TC=0+-100	24546	C3-1/8-T00-16R2-G
A15R27	0698-7193	5		RESISTOR 16.2 1% .05W F TC=0+-100	24546	C3-1/8-T00-16R2-G
A15R28	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A15R29	0698-7268	5		RESISTOR 21.5K 1% .05W F TC=0+-100	24546	C3-1/8-T0-2152-G
A15R30	0757-0280	3	2	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A15R31	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1001-G
A15R32	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1001-G
A15R33	0698-7225	4		RESISTOR 348 1% .05W F TC=0+-100	24546	C3=1/8-T0=348R-G
A15R34	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A15R35	0698-7225	4		RESISTOR 348 1% .05W F TC=0+-100	24546	C3=1/8-T0=348R-G
A15R36	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1001-G
A15R37	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1001-G
A15R38	0698-7236	7		RESISTOR 1K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1001-G
A15R39	0698-7229	8	2	RESISTOR 511 1% .05W F TC=0+-100	24546	C3=1/8-T0=511R-G
A15R40	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3=1/8-T0=511R-G
A15R41	0698-7246	9	1	RESISTOR 2.61K 1% .05W F TC=0+-100	24546	C3=1/8-T0=2611-G
A15R42	0698-7234	5	1	RESISTOR 825 1% .05W F TC=0+-100	24546	C3=1/8-T0=825R-G
A15R43	0698-7245	8	1	RESISTOR 2.37K 1% .05W F TC=0+-100	24546	C3=1/8-T0=2371-G
A15R44	0698-7260	7		RESISTOR 10K 1% .05W F TC=0+-100	24546	C3=1/8-T0=1002-G
A15TP1	1251-5177	6	13	CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP2	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP3	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP4	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP5	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP6	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP7	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP8	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP9	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP10	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP11	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP12	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15TP13	1251-5177	6		CONNECTOR-SGL CONT PIN .031-IN-BSC-SZ	28480	1251-5177
A15U1	1820-1144	6	1	IC GATE TTL LS NOR QUAD 2-INP	01295	SN74LS02N
A15U2	1820-1492	7	2	IC BFR TTL LS INV HEX 1-INP	01295	SN74LS368N
A15U3	1820-1492	7		IC BFR TTL LS INV HEX 1-INP	01295	SN74LS368N
A15U4	1820-1288	9	1	IC DRVR TTL/MOS CLOCK DRVR 1-INP	04713	MHM0026CL
A15U5	1820-0180	0	1	IC TIMER TTL MONO/ASTBL	18324	NE555V
A15U6	1820-1277	6	1	IC CNTR TTL LS DECD UP/DOWN SYNCHRO	01295	SN74LS192N
A15U7	1820-1195	7	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A15U8	1820-1199	1	1	IC INV TTL LS HEX 1-INP	01295	SN74LS04N
A15U9	1820-1198	0	1	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS03N
A15U10	1820-1416	5	1	IC SCHMITT-TRIG TTL LS INV HEX 1-INP	01295	SN74LS14N
A15U11	1820-1204	9	1	IC GATE TTL LS NAND DUAL 4-INP	01295	SN74LS20N
A15U12	1820-0681	4	1	IC GATE TTL S NAND QUAD 2-INP	01295	SN74S06N
A15U13	09825-67907	7	1	IC, HYBRID	28480	09825-67907
A15U14	1906-0075	2	2	D-ARRAY 14-DIP	28480	1906-0075
A15U15	1810-0338	7	2	NETWORK-RES 16-PIN-DIP .1-PIN-SPCG	11236	761-3-R100
A15U16	1906-0075	2		D-ARRAY 14-DIP	28480	1906-0075
A15U17	1810-0338	7		NETWORK-RES 16-PIN-DIP .1-PIN-SPCG	11236	761-3-R100
A15VR1	1902-0072	1	1	DIODE-ZNR 7.87V 2% DO-7 PDM .4W TC=+.051%	28480	1902-0072
A15VR2	1902-3048	7	1	DIODE-ZNR 3.46V 5% DO-7 PDM .4W TC=+.058%	28480	1902-3048
A15VR3	1902-0551	1	1	DIODE-ZNR 6.19V 5% DO-15 PDM .1W TC=+.022%	28480	1902-0551
A15 MISCELLANEOUS PARTS						
	1205-0050	7	1	HEAT SINK TO-5/T0-39-PKG	28480	1205-0050
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0749	4	1	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749
	4040-0753	0	1	EXTRACTOR-PC BOARD GRN POLYC	28480	4040-0753
	2260-0009	3	6	NUT-HEX-W/LKWR 4-40-TMD .094-IN-TMK	00000	ORDER BY DESCRIPTION
	85680-20080	4	1	HEATSINK	28480	85680-20080
	1530-1098	4	2	CLEVIS 0.070-IN W SLT 0.454-IN PIN CTR	00000	ORDER BY DESCRIPTION
	2190-0004	9	2	WASHER-LK INTL T NO. 6 .115-IN-ID	28480	2190-0004
	2190-0034	5	2	WASHER-LK HLCL NO. 10 .194-IN-ID	28480	2190-0034
	2190-0401	0	1	WASHER-FL NM NO. 4 .12-IN-ID .312-IN-OD	28480	2190-0401
	2200-0107	6	1	SCREW-MACH 4-40 .375-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2200-0143	0	2	SCREW-MACH 4-40 .375-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	2260-0002	6	2	NUT-HEX-DBL-CHAM 4-40-TMD .062-IN-TMK	00000	ORDER BY DESCRIPTION
	1200-0173	5	1	INSULATOR-XSTR DAP-GL (FOR Q2)	28480	1200-0173
	09825-67908	8	1	GASKET FOR U13 HYBRID	28480	09825-67908

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A16	85660-60134	9	1	BOARD ASSEMBLY, SCAN GENERATOR	28480	85660-60134
A16C1	0160-3658	0	1	CAPACITOR-FXD 10UF +-10% 50VDC MET-POLYC	28480	0160-3658
A16C2	0160-2208	4	1	CAPACITOR-FXD 330PF +-5% 300VDC MICA	28480	0160-2208
A16C3	0160-0127	2	17	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C4	0160-0116	1	1	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	1500685X903582
A16C5	0160-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	1500226X901582
A16C6	0160-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	1500336X901082
A16C7	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C8	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C9	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C10	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C11	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C12	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C13	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C14	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C15	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C16	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C17	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C18	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C19	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C20				NOT ASSIGNED		
A16C21	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C22	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C23	0160-3447	5	1	CAPACITOR-FXD 470PF +-10% 1KVDC CER	28480	0160-3447
A16C24	0160-3097	1	1	CAPACITOR-FXD .47UF +-80-20% 50VDC CER	28480	0160-3097
A16C25	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A16C26	0160-0291	3		CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	1500105X9035A2
A16C27	0160-3448	6	2	CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3448
A16C28	0160-3448	6		CAPACITOR-FXD 1000PF +-10% 1KVDC CER	28480	0160-3448
A16CR1	1901-0539	3	1	DIODE-SCHOTTKY	28480	1901-0539
A16CR2				NOT ASSIGNED		
A16CR3				NOT ASSIGNED		
A16CR4				NOT ASSIGNED		
A16CR5				NOT ASSIGNED		
A16CR6	1901-0040	1	1	DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A16J1	1250-0543	8	4	CONNECTOR-RF 3M-3NP M PC 50-OHM	28480	1250-0543
A16J2	1250-0543	8		CONNECTOR-RF 3M-3NP M PC 50-OHM	28480	1250-0543
A16J3	1250-0543	8		CONNECTOR-RF 3M-3NP M PC 50-OHM	28480	1250-0543
A16J4	1250-0543	8		CONNECTOR-RF 3M-3NP M PC 50-OHM	28480	1250-0543
A16Q1	1855-0082	2	8	TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q2	1855-0082	2		TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q3	1855-0082	2		TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q4	1855-0082	2		TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q5	1853-0281	9	1	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MH	04713	2N2907A
A16Q6	1854-0404	0	4	TRANSISTOR NPN SI TO-18 PD=360MH	28480	1854-0404
A16Q7	1855-0082	2		TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q8	1855-0020	6	4	TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A16Q9	1855-0082	2		TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q10	1855-0082	2		TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q11	1855-0020	8		TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A16Q12	1855-0082	2		TRANSISTOR J-FET P-CHAN D-MODE SI	28480	1855-0082
A16Q13	1855-0020	8		TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A16Q14	1855-0020	8		TRANSISTOR J-FET N-CHAN D-MODE TO-18 SI	28480	1855-0020
A16Q15	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MH	28480	1854-0404
A16Q16	1854-0557	4	2	TRANSISTOR NPN 2N2432A SI TO-18 PD=300MH	01295	2N2432A
A16Q17	1853-0322	9	3	TRANSISTOR PNP 2N2946A SI TO-46 PD=400MH	01295	2N2946A
A16Q18	1853-0322	9		TRANSISTOR PNP 2N2946A SI TO-46 PD=400MH	01295	2N2946A
A16Q19	1853-0322	9		TRANSISTOR PNP 2N2946A SI TO-46 PD=400MH	01295	2N2946A
A16Q20	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MH	28480	1854-0404
A16Q21	1854-0557	4		TRANSISTOR NPN 2N2432A SI TO-18 PD=300MH	01295	2N2432A
A16Q22	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MH	28480	1854-0404
A16R1	0757-0464	5	1	RESISTOR 90.9K 1% .125W F TC=0+-100	24546	C4=1/8-T0-9092-F
A16R2	0683-2265	1	1	RESISTOR 22M 5% .25W FC TC=900/+1200	01121	C82265
A16R3				NOT ASSIGNED		
A16R4	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1003-F
A16R5	0757-0470	3	1	RESISTOR 162K 1% .125W F TC=0+-100	24546	C4=1/8-T0-1623-F
A16R6	0698-8827	4	1	RESISTOR 1M 1% .125W F TC=0+-100	28480	0698-8827
A16R7	0698-3450	9	1	RESISTOR 42.2K 1% .125W F TC=0+-100	24546	C4=1/8-T0-4222-F
A16R8	0698-3459	8	1	RESISTOR 383K 1% .125W F TC=0+-100	28480	0698-3459
A16R9	0698-3153	9	2	RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3831-F
A16R10	0698-3161	9	2	RESISTOR 38.3K 1% .125W F TC=0+-100	24546	C4=1/8-T0-3832-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A16R11	0698-3446	3	1	RESISTOR 383 1% .125W F TC=0+-100	24546	C4-1/8-T0-383W-F
A16R12	0698-3153	9		RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3831-F
A16R13	0757-0416	7		RESISTOR 511 1% .125W F TC=0+-100	24546	C4-1/8-T0-511R-F
A16R14	0757-0443	0	1	RESISTOR 11K 1% .125W F TC=0+-100	03292	C4-1/8-T0-1102-F
A16R15	0757-0442	9	15	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R16	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R17	0757-0199	3	3	RESISTOR 21.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2152-F
A16R18	0698-0084	9	3	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A16R19	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A16R20	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R21	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R22	0757-0199	3		RESISTOR 21.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2152-F
A16R23	0757-0459	8	2	RESISTOR 56.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5622-F
A16R24	0698-3136	8	4	RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A16R25	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A16R26	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R27	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R28	0698-3161	9		RESISTOR 38.3K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3832-F
A16R29	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A16R30	0698-3160	8	1	RESISTOR 31.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3162-F
A16R31	0757-0289	2	1	RESISTOR 13.3K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-1332-F
A16R32	0757-1094	9	1	RESISTOR 1.47K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1471-F
A16R33	0757-0439	4	1	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4-1/8-T0-6811-F
A16R34	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R35	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F
A16R36	0757-0288	1	2	RESISTOR 9.09K 1% .125W F TC=0+-100	03292	C4-1/8-T0-9091-F
A16R37	0757-0288	1		RESISTOR 9.09K 1% .125W F TC=0+-100	03292	C4-1/8-T0-9091-F
A16R38	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1622-F
A16R39	0698-3158	4	2	RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2372-F
A16R40	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R41	0757-0440	7	3	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A16R42				NOT ASSIGNED		
A16R43				NOT ASSIGNED		
A16R44	0699-0307	1	1	RESISTOR 35.75K .1% .1W	28480	0699-0307
A16R45	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R46	0699-0311	7	1	RESISTOR 74.25K .1% .1W	28480	0699-0311
A16R47				NOT ASSIGNED		
A16R48	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R49	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R50	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R51				NOT ASSIGNED		
A16R52				NOT ASSIGNED		
A16R53	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A16R54	0757-0440	7		RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A16R55	0757-0459	8		RESISTOR 56.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5622-F
A16R56	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R57	0698-3443	0	1	RESISTOR 287 1% .125W F TC=0+-100	24546	C4-1/8-T0-287R-F
A16R58	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A16R59-				NOT ASSIGNED		
A16R66				NOT ASSIGNED		
A16R67	2100-1761	8	1	RESISTOR-TMR 10K 5% WW SIDE-ADJ 1-TRN	28480	2100-1761
A16R68	2100-1759	4	3	RESISTOR-TMR 2K 5% WW SIDE-ADJ 1-TRN	28480	2100-1759
A16R69				NOT ASSIGNED		
A16R70	0698-3158	4		RESISTOR 23.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2372-F
A16R71	2100-1759	4		RESISTOR-TMR 2K 5% WW SIDE-ADJ 1-TRN	28480	2100-1759
A16R72	2100-1759	4		RESISTOR-TMR 2K 5% WW SIDE-ADJ 1-TRN	28480	2100-1759
A16R73	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A16R74	2100-1762	9	3	RESISTOR-TMR 20K 5% WW SIDE-ADJ 1-TRN	28480	2100-1762
A16R75	2100-1762	9		RESISTOR-TMR 20K 5% WW SIDE-ADJ 1-TRN	28480	2100-1762
A16R76	2100-1762	9		RESISTOR-TMR 20K 5% WW SIDE-ADJ 1-TRN	28480	2100-1762
A16R77-				NOT ASSIGNED		
A16R79				NOT ASSIGNED		
A16R80	0699-0308	2	4	RESISTOR 24.97K .02% .1W	28480	0699-0308
A16R81	0699-0308	2		RESISTOR 24.97K .02% .1W	28480	0699-0308
A16R82	0699-0308	2		RESISTOR 24.97K .02% .1W	28480	0699-0308
A16R83	0699-0308	2		RESISTOR 24.97K .02% .1W	28480	0699-0308
A16R84	0757-0440	7		RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A16R85				NOT ASSIGNED		
A16R86	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A16R87-				NOT ASSIGNED		
A16R89				NOT ASSIGNED		
A16R90	0698-3136	8		RESISTOR 17.8K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1782-F
A16R91	0757-0199	3		RESISTOR 21.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2152-F
A16R92	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A16R93	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A16R94	0698-3162	0	1	RESISTOR 46.4K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4642-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A16R95	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A16TP1	1251-0600	0	8	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16TP6	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	28480	1251-0600
A16U1	1810-0206	8	1	NETWORK-RES 8-PIN-SIP .1-PIN-3PCG	11236	750-81-H10K
A16U2	1810-0207	9	1	NETWORK-RES 8-PIN-SIP .1-PIN-3PCG	11236	750-81-H22K
A16U3	1826-0261	8	2	IC 741 OP AMP TO-99	28480	1826-0261
A16U4	1826-0102	6	1	IC OP AMP TO-99	27014	LM312M
A16U5	1826-0541	7	2	IC 7520 CONV 16-DIP-P	28480	1826-0541
A16U6	1826-0092	3	1	IC OP AMP TO-99	28480	1826-0092
A16U7	1826-0541	7		IC 7520 CONV 16-DIP-P	28480	1826-0541
A16U8	1826-0371	1	2	IC OP AMP TO-99	03406	LF256H
A16U9	1826-0448	3	1	IC DIGITAL-ANALOG CONV 7520	28480	1826-0448
A16U10	1826-0180	0	1	IC TIMER TTL MONO/ASTBL	18324	NE555V
A16U11	1826-0161	7	2	IC 324 OP AMP 14-DIP-P	18324	LM324-A
A16U12	1826-0229	8	1	IC OP AMP TO-99	06665	OP-05CJ
A16U13	1826-0371	1		IC OP AMP TO-99	03406	LF256H
A16U14	1820-1425	6	1	IC SCHMITT-TRIG TTL LS NAND QUAD 2-INP	01295	SN74LS132N
A16U15	1813-0041	5	1	IC OP AMP TO-99	27014	LM0042CM
A16U16	1820-1112	8	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG	01295	SN74LS174N
A16U17	1826-0261	8		IC 741 OP AMP TO-99	28480	1826-0261
A16U18	1820-1196	8	6	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A16U19	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A16U20	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A16U21	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A16U22	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A16U23	1820-1196	8		IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS174N
A16U24	1820-1195	7	1	IC FF TTL LS D-TYPE POS-EDGE-TRIG COM	01295	SN74LS175N
A16U25	1820-1197	9	2	IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS00N
A16U26	1820-1197	9		IC GATE TTL LS NAND QUAD 2-INP	01295	SN74LS00N
A16U27	1826-0161	7		IC 324 OP AMP 14-DIP-P	18324	LM324-A
A16VR1	1902-3203	6	2	DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
A16VR2	1902-3203	6		DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
A16VR3	1902-0680	7	1	DIODE-ZNR 1N827 6.2V 5% DO-7 PD=.25W	24046	1N827
A16W1	1460-1489	8	1	WIREFORM BE CU AG	28480	1460-1489
A16 MISCELLANEOUS PARTS						
	1480-0073	6	2	PIN-ROLL .062-IN-DIA .25-IN-LG BE-CU	28480	1480-0073
	4040-0749	4	1	EXTRACTOR-PC BOARD BRN POLYC	28480	4040-0749
	4040-0754	1	1	EXTRACTOR-PC BOARD BLU POLYC	28480	4040-0754
	3050-0079	3	2	WASHER-FIL NM NO. 2 .094-IN-ID .188-IN-OD (USE WITH J1 AND J2)	28480	3050-0079

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A17	85660-60036	0	1	BOARD ASSEMBLY, POSITIVE REGULATOR	28480	85660-60036
A17C1	0180-2205	3	1	CAPACITOR-FXD .33UF+-10% 35VDC TA	56289	150D334X9035A2
A17C2	0180-0116	1	2	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A17C3	0180-1746	5	1	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A17C4	0160-2199	2	2	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A17C5	0180-0228	6	2	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A17C6	0180-0116	1		CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A17C7	0160-0573	2	1	CAPACITOR-FXD 4700PF +-20% 100VDC CER	28480	0160-0573
A17C8	0160-4256	6	2	CAPACITOR-FXD .047UF +-20% 200VDC CER	16546	CW30 B 473M
A17C9	0160-4256	6		CAPACITOR-FXD .047UF +-20% 200VDC CER	16546	CW30 B 473M
A17C10	0160-2199	2		CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A17C11	0180-0197	8	3	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A17C12	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A17C13	0160-0127	2	1	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A17C14	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A17C15	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A17CR1	1884-0018	5	2	THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A17CR2	1884-0046	9	1	THYRISTOR-SCR VRRM=50	03508	C230F
A17CR3	1901-0743	1	1	DIODE-PWR RECT 1N4004 400V 1A DO-41	01295	1N4004
A17CR4	1901-0033	2	5	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A17CR5	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A17CR6	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A17CR7	1884-0018	5		THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A17CR8				NOT ASSIGNED		
A17CR9				NOT ASSIGNED		
A17CR10				NOT ASSIGNED		
A17CR11	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A17CR12	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A17DS1	1990-0487	7	3	LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A17DS2	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A17DS3	1990-0404	8	1	LED-VISIBLE LUM-INT=300UCD IF=50MA-MAX	28480	5082-4480
A17DS4	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A17F1	2110-0001	0	1	FUSE 1A 250V FAST-BLO 1.25X.25 UL IEC	75915	312001
A17F2	2110-0003	8	1	FUSE 3A 250V FAST-BLO 1.25X.25 UL IEC	75915	312003
A17F3	2110-0056	3	1	FUSE 6A 250V FAST-BLO 1.25X.25 UL IEC	75915	312006
A17Q1	1853-0012	4	1	TRANSISTOR PNP 2N2904A SI TO-18 PD=600MW	01295	2N2904A
A17Q2	1853-0050	0	1	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0050
A17Q3	1854-0404	0	7	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A17Q4	1854-0441	5	1	TRANSISTOR NPN SI PD=5.8W FT=800KHZ	28480	1854-0441
A17Q5	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A17Q6	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A17Q7	1853-0281	9	2	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A17Q8	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A17Q9	1853-0281	9		TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A17Q10	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A17Q11	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A17Q12	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A17R1	0757-0443	0	3	RESISTOR 11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1102-F
A17R2	0757-0401	0	4	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A17R3	0811-1659	8	1	RESISTOR .27 5% 2W PW TC=0+-800	75042	BWM2=27/100-J
A17R4	0757-0418	9	2	RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A17R5	0757-0443	0		RESISTOR 11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1102-F
A17R6	0757-0394	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4-1/8-T0-51R1-F
A17R7	0698-3150	6	4	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A17R8	0698-3442	9	1	RESISTOR 237 1% .125W F TC=0+-100	24546	C4-1/8-T0-237R-F
A17R9	0698-8465	6	1	RESISTOR 7.15K .5% .125W F TC=0+-50	28480	0698-8465
A17R10	0698-6835	0	3	RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55=1/8-T2=3161-D
A17R11	0757-0280	3	6	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A17R12	0757-0278	9	2	RESISTOR 1.78K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1781-F
A17R13	0683-0275	9	2	RESISTOR 2.7 5% .25W FC TC=400/+500	01121	CB27G5
A17R14	0698-3444	1	4	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A17R15	0757-0346	2	3	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A17R16	0757-0278	9		RESISTOR 1.78K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1781-F
A17R17	0698-3162	0	1	RESISTOR 46.4K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4642-F
A17R18	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A17R19	0757-0438	3	5	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A17R20	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A17R21	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A17R22	0757-0443	0		RESISTOR 11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1102-F
A17R23	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A17R24	0757-0399	5	1	RESISTOR 82.5 1% .125W F TC=0+-100	24546	C4-1/8-T0-82R5-F
A17R25	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A17R26	0757-0401	0	3	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A17R27	0811-1661	2		RESISTOR .39 5% 2W PW TC=0+-800	75042	8WH2-39/100-J
A17R28	0811-1661	2		RESISTOR .39 5% 2W PW TC=0+-800	75042	8WH2-39/100-J
A17R29	0811-1661	2		RESISTOR .39 5% 2W PW TC=0+-800	75042	8WH2-39/100-J
A17R30	0757-0419	0		RESISTOR 681 1% .125W F TC=0+-100	24546	C4-1/8-T0-681R-F
A17R31	0757-0420	3	1	RESISTOR 750 1% .125W F TC=0+-100	24546	C4-1/8-T0-751-F
A17R32	0698-3154	0	1	RESISTOR 4.22K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4221-F
A17R33	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A17R34	0698-8466	7		RESISTOR 942 .5% .125W F TC=0+-50	28480	0698-8466
A17R35	0698-6835	0		RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55-1/8-T2-3161-D
A17R36	0698-6835	0		RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55-1/8-T2-3161-D
A17R37	0683-0275	9		RESISTOR 2.7 5% .25W FC TC=-400/+500	01121	C827G5
A17R38	0698-3444	1	0	RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A17R39	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A17R40	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A17R41	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A17R42	0757-0418	9		RESISTOR 619 1% .125W F TC=0+-100	24546	C4-1/8-T0-619R-F
A17R43	0698-3156	2	1	RESISTOR 14.7K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1472-F
A17R44	0757-0459	8	3	RESISTOR 56.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5622-F
A17R45	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A17R46	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A17R47	0757-0290	5		RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A17R48	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A17R49	0698-8464	5	1	RESISTOR 12.6K .5% .125W F TC=0+-50	28480	0698-8464
A17R50	2100-3095	5	1	RESISTOR-TMR 200 10% C 8IDE-ADJ 17-TRN	02111	43P201
A17R51	0757-0280	3	1	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A17R52	0698-0084	9		RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A17R53	0698-4405	6		RESISTOR 107 1% .125W F TC=0+-100	24546	C4-1/8-T0-107R-F
A17R54	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A17R55	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A17R56	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1962-F
A17R57	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A17R58	0698-3634	1		RESISTOR 470 5% 2W MO TC=0+-200	28480	0698-3634
A17R59	0757-0459	8		RESISTOR 56.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5622-F
A17R60	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A17R61				NOT ASSIGNED		
A17R62	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A17R63	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A17R64	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A17R65	0757-0459	8		RESISTOR 56.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5622-F
A17R66	0757-0438	3		RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A17R71	0837-0126	6	1	THERMISTOR DISC 1K-OHM TC=-4.4%/C-DEG	28480	0837-0126
A17TP1	1251-0600	0	8	CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17TP6	1251-0600	0	0	CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17TP7	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17TP8	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-82 80	28480	1251-0600
A17U1	1820-0223	0	2	IC 301 OP AMP TO-99	04713	MLM301AG
A17U2	1820-0223	0		IC 301 OP AMP TO-99	04713	MLM301AG
A17U3	1826-0161	7		IC 324 OP AMP 14-DIP-P	18324	LM324-A
A17VR1	1902-3171	7	1	DIODE-ZNR 11V 5% DO-7 PD=.4W TC=+.062%	28480	1902-3171
A17VR2	1902-0686	3	2	DIODE-ZNR 1N825 6.2V 2% DO-7 PD=.4W	04713	1N825
A17VR3	1902-3252	5	1	DIODE-ZNR 22.6V 2% DO-7 PD=.4W TC=+.073%	28480	1902-3252
A17VR4	1902-0049	2	2	DIODE-ZNR 6.19V 5% DO-7 PD=.4W TC=+.022%	28480	1902-0049
A17VR5	1902-0686	3	1	DIODE-ZNR 1N825 6.2V 2% DO-7 PD=.4W	04713	1N825
A17VR6	1902-0049	2		DIODE-ZNR 6.19V 5% DO-7 PD=.4W TC=+.022%	28480	1902-0049
A17VR7	1902-3197	7		DIODE-ZNR 13.7V 2% DO-7 PD=.4W TC=+.057%	28480	1902-3197
A17VR8	1902-3172	8		DIODE-ZNR 11V 2% DO-7 PD=.4W TC=+.062%	28480	1902-3172
A17 MISCELLANEOUS PARTS						
	5000-9043	6	1	PIN:P.C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	BOARD EXTRACTOR	28480	5040-6843
	2110-0269	0	6	FUSEHOLDER-CLIP TYPE,250-FUSE	28480	2110-0269
	2190-0014	1	2	WASHER-LK INTL T NO. 2 .089-IN-ID	28480	2190-0014
	2190-0027	6	1	WASHER-LK INTL T 1/4 IN .256-IN-ID	28480	2190-0027
	2950-0051	8	1	NUT-MEX-DBL-CHAM 1/4-28-THD .094-IN-TMK	00000	ORDER BY DESCRIPTION

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A18	85660-60137	2	1	BOARD ASSEMBLY, NEGATIVE REGULATOR	28480	85660-60137
A18C1	0160-2199	2	3	CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A18C2	0180-0228	6	3	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A18C3	0180-1746	5	2	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A18C4	0160-2199	2		CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A18C5	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A18C6	0160-2199	2		CAPACITOR-FXD 30PF +-5% 300VDC MICA	28480	0160-2199
A18C7	0180-0228	6		CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A18C8	0180-1731	8	1	CAPACITOR-FXD 4.7UF+-10% 50VDC TA	56289	150D475X9050B2
A18C9	0160-4256	6	3	CAPACITOR-FXD .047UF +-20% 200VDC CER	16546	C430 B 473M
A18C10	0180-1746	5		CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	150D156X9020B2
A18C11	0160-0127	2	3	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A18C12	0160-4256	6		CAPACITOR-FXD .047UF +-20% 200VDC CER	16546	C430 B 473M
A18C13	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A18C14	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A18C15	0160-4256	6		CAPACITOR-FXD .047UF +-20% 200VDC CER	16546	C430 B 473M
A18C16	0180-0100	3	1	CAPACITOR-FXD 4.7UF +-10% 35VDC TA	04200	150D475X9035B2
A18CR1	1901-0033	2	7	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A18CR2	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A18CR3	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A18CR4	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A18CR5	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A18CR6	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A18CR7	1901-0033	2		DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A18CR8	1901-0662	3	3	DIODE-PWR RECT 100V 6A	04713	MR751
A18CR9	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A18CR10				NOT ASSIGNED		
A18CR11				NOT ASSIGNED		
A18CR12	1901-0662	3		DIODE-PWR RECT 100V 6A	04713	MR751
A18CR13				NOT ASSIGNED		
A18CR14				NOT ASSIGNED		
A18CR15	1901-0743	1	1	DIODE-PWR RECT 1N4004 400V 1A DO-41	01295	1N4004
A18CR16				NOT ASSIGNED		
A18CR24				NOT ASSIGNED		
A18CR25	1884-0018	5	3	THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A18CR26	1884-0018	5		THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A18CR27	1884-0018	5		THYRISTOR-SCR 2N4186 VRRM=200	04713	2N4186
A18D81	1990-0487	7	3	LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A18D82	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A18D83	1990-0487	7		LED-VISIBLE LUM-INT=1MCD IF=20MA-MAX	28480	5082-4584
A18F1	2110-0083	6	1	FUSE 2.5A 250V FAST-BLU 1.25X.25 UL IEC	28480	2110-0083
A18F2	2110-0043	8	1	FUSE 1.5A 250V FAST-BLU 1.25X.25 UL IEC	28480	2110-0043
A18F3	2110-0010	9	1	FUSE 5A 250V FAST-BLU 1.25X.25 UL IEC	75915	312005
A18Q1	1854-0404	0	2	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A18Q2	1854-0441	5	1	TRANSISTOR NPN SI PD=5.8W FT=800KHZ	28480	1854-0441
A18Q3	1853-0001	1	1	TRANSISTOR PNP SI TO-39 PD=600MW	28480	1853-0001
A18Q4	1853-0007	7	1	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A18Q5	1854-0271	9	1	TRANSISTOR NPN SI TO-39 PD=1W FT=150MHZ	28480	1854-0271
A18Q6	1854-0404	0		TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A18R1	0811-1552	4	2	RESISTOR .56 5% 2W PW TC=0+-800	75042	BHM2-9/16-J
A18R2	0757-0421	0	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4=1/8-T0=825R-F
A18R3	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5111-F
A18R4	0757-0280	3	6	RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A18R5	0698-6635	0	6	RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55=1/8-T2=3161-D
A18R6	0698-6635	0		RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55=1/8-T2=3161-D
A18R7	0698-6635	0		RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55=1/8-T2=3161-D
A18R8	0683-0275	9	3	RESISTOR 2.7 5% .25W FC TC=400/+500	01121	C827G5
A18R9	0698-3444	1	4	RESISTOR 316 1% .125W F TC=0+-100	24546	C4=1/8-T0=316R-F
A18R10	0757-0346	2	3	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A18R11	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A18R12	0757-0428	1	1	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1621-F
A18R13	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4=1/8-T0=422R-F
A18R14	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4=1/8-T0=316R-F
A18R15	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0-F
A18R16	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4=1/8-T0=316R-F
A18R17	0811-1665	6	1	RESISTOR .82 5% 2W PW TC=0+-800	75042	BHM2-82/100-J
A18R18	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A18R19	0698-3449	6	1	RESISTOR 28.7K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2872-F
A18R20	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1001-F
A18R21	0757-0442	9	2	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A18R22	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A18R23	0811-1552	0		RESISTOR .56 5% 2W PW TC=0+-800	75042	BHM2-9/16-J
A18R24	0698-8464	5	1	RESISTOR 12.6K .5% .125W F TC=0+-50	28480	0698-8464
A18R25	0698-6635	0		RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55=1/8-T2=3161-D

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A18R26	0698-6835	0	2	RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55-1/8-T2-3161-D
A18R27	0698-0275	9		RESISTOR 2.7 5% .25W FC TC=-400/+500	01121	CB27G5
A18R28	0698-3444	1		RESISTOR 316 1% .125W F TC=0+-100	24546	C4-1/8-T0-316R-F
A18R29	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A18R30	0698-3150	6		RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A18P31	0698-3150	6	3	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2371-F
A18R32	0812-0066	1		RESISTOR .33 5% 2W PH TC=0+-800	75042	8WM2-33/100-J
A18R33	0812-0066	1		RESISTOR .33 5% 2W PH TC=0+-800	75042	8WM2-33/100-J
A18R34	0812-0066	1		RESISTOR .33 5% 2W PH TC=0+-800	75042	8WM2-33/100-J
A18R35	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A18R36	0757-0441	8	1	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4-1/8-T0-8251-F
A18R37	0698-6835	0	1	RESISTOR 3.16K .5% .125W F TC=0+-50	24546	NC55-1/8-T2-3161-D
A18R38	0698-7050	3		RESISTOR 4.48K .5% .125W F TC=0+-50	28480	0698-7050
A18R39	0698-6853	2		RESISTOR 7.68K .5% .125W F TC=0+-50	24546	NC55-1/8-T2-7681-D
A18R40	0683-0275	9		RESISTOR 2.7 5% .25W FC TC=-400/+500	01121	CB27G5
A18P41				NOT ASSIGNED		
A18P42			4	NOT ASSIGNED		
A18R43	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A18R44	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A18R45	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A18R46	0757-0280	3		RESISTOR 1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1001-F
A18R47	0757-0401	0	5	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A18TP1	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-8Z 8Q	28480	1251-0600
A18TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-8Z 8Q	28480	1251-0600
A18TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-8Z 8Q	28480	1251-0600
A18TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-8Z 8Q	28480	1251-0600
A18TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-B8C-8Z 8Q	28480	1251-0600
A18U1	1820-0223	0	3	IC 301 OP AMP T0-99	04713	MLM301AG
A18U2	1820-0223	0	1	IC 301 OP AMP T0-99	04713	MLM301AG
A18U3	1820-0223	0		IC 301 OP AMP T0-99	04713	MLM301AG
A18VR1	1902-0025	4		DIODE-ZNR 10V 5% DO-7 PD=.4W TC=+.06%	28480	1902-0025
A18VR2	1902-3171	7		DIODE-ZNR 11V 5% DO-7 PD=.4W TC=+.062%	28480	1902-3171
A18VR3	1902-3330	0		DIODE-ZNR 44.2V 2% DO-7 PD=.4W TC=+.081%	28480	1902-3330
A18VR4	1902-0049	2	1	DIODE-ZNR 6.19V 5% DO-7 PD=.4W TC=+.022%	28480	1902-0049
A18 MISCELLANEOUS PARTS						
	5000-9043	6	1	PIN:P,C, BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	BOARD EXTRACTOR	28480	5040-6843
	2110-0269	0	6	FUSEHOLDER=CLIP TYPE,250-FUSE	28480	2110-0269

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A19	85600-60038	2	1	BOARD ASSY, DIGITAL-TO-ANALOG CONVERTER	28480	85600-60038
A19C1	0160-0127	2	5	CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A19C2	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A19C3				NOT ASSIGNED		
A19C4	0160-2055	9	6	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A19C5	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A19C6	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A19C7	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A19C8				NOT ASSIGNED		
A19C9				NOT ASSIGNED		
A19C10	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A19C11	0160-0116	1	2	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A19C12	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A19C13	0160-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	150D336X9010B2
A19C14	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A19C15	0160-0183	2	1	CAPACITOR-FXD 10UF+75-10% 50VDC AL	56289	30D106G050C82
A19C16	0160-0127	2		CAPACITOR-FXD 1UF +-20% 25VDC CER	28480	0160-0127
A19C17	0160-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	150D226X9015B2
A19C18	0160-0116	1		CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X9035B2
A19C19	0160-0291	3	2	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A19C20	0160-0291	3		CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	150D105X9035A2
A19C21				NOT ASSIGNED		
A19C22				NOT ASSIGNED		
A19C23	0160-2055	9		CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A19CR1	1901-0179	7	1	DIODE-SWITCHING 15V 50MA 750P8 DO-7	28480	1901-0179
A19Q1	1853-0281	9	1	TRANSISTOR PNP 2N2907A SI TO-18 PD=400MW	04713	2N2907A
A19Q2	1853-0322	9	6	TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A19Q3	1853-0322	9		TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A19Q4	1853-0322	9		TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A19Q5	1853-0322	9		TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A19Q6	1853-0322	9		TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A19Q7	1853-0322	9		TRANSISTOR PNP 2N2946A SI TO-46 PD=400MW	01295	2N2946A
A19R1	0699-0303	7	2	RESISTOR 1.33K 1% .1W	28480	0699-0303
A19R2	2100-3268	4	2	RESISTOR-TRMR 5K 10% C SIDE-ADJ 17-TRN	28480	2100-3268
A19R3	0699-0305	9	1	RESISTOR 5.9K .1% .1W	28480	0699-0305
A19R4	0699-0303	7		RESISTOR 1.33K 1% .1W	28480	0699-0303
A19R5	2100-3268	4		RESISTOR-TRMR 5K 10% C SIDE-ADJ 17-TRN	28480	2100-3268
A19R6	0699-0231	0	1	RESISTOR 6.223K .1% .1W F TC=0+-5	28480	0699-0231
A19R7	0699-0306	0	1	RESISTOR RESISTOR 6K .02% .1W	28480	0699-0306
A19R8	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A19R9	0757-0428	1	2	RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1621=F
A19R10	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A19R11	0764-0016	8	1	RESISTOR 1K 5% 2W MO TC=0+-200	28480	0764-0016
A19R12	0757-0439	4	1	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0=6811=F
A19R13	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A19R14	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A19R15	0757-0198	2	1	RESISTOR 100 1% .5W F TC=0+-100	28480	0757-0198
A19R16-				NOT ASSIGNED		
A19R18				RESISTOR-TRMR 20K 5% MN SIDE-ADJ 1-TRN	28480	2100-1762
A19R19	2100-1762	9	1	RESISTOR 1K 1% .5W F TC=0+-100	28480	0757-0159
A19R20	0757-0159	5		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R21	0757-0442	9	9	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R22	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R23	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R24	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R25	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R26	0699-0302	6	1	RESISTOR 800 .02% .1W	28480	0699-0302
A19R27	0699-0304	8	1	RESISTOR 8K .02% .1W	28480	0699-0304
A19R28	0699-0309	3	1	RESISTOR 80K .02% .1W	28480	0699-0309
A19R29	0699-0310	6	1	RESISTOR 800K .02% .25W PWN TC=0+-10	28480	0699-0310
A19R30	0683-4755	8	1	RESISTOR 4.7M 5% .25W FC TC=+900/+1100	01121	C84755
A19R31				NOT ASSIGNED		
A19R32	2100-3165	0	2	RESISTOR-TRMR 2M 20% C SIDE-ADJ 17-TRN	02111	43P205
A19R33	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R34	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R=F
A19R35	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R36	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4=1/8-T0=7501=F
A19R37	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002=F
A19R38	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1003=F
A19R39	0757-0428	1		RESISTOR 1.62K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1621=F
A19R40	0698-3152	8	1	RESISTOR 3.48K 1% .125W F TC=0+-100	24546	C4=1/8-T0=3481=F
A19R41	2100-3123	0	1	RESISTOR-TRMR 500 10% C SIDE-ADJ 17-TRN	02111	43P301

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A19R42	0757-0442	9		RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A19R43	2100-3165	0		RESISTOR-TMR 2M 20% C SIDE-ADJ 17-TRN	02111	43P205
A19R44	0698-8826	3	1	RESISTOR 825K 1% .125W F TC=0+-100	28480	0698-8826
A19R45	0698-3431	6	1	RESISTOR 23.7 1% .125W F TC=0+-100	03888	PHE55-1/8-T0-2387-F
A19TP1	1251-0600	0	3	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 80	28480	1251-0600
A19TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 80	28480	1251-0600
	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-8Z 80	28480	1251-0600
A19U1	1826-0308	4	1	IC 562 CONV 24-DIP-C	24355	AD562KD/BIN
A19U2	1826-0371	1	1	IC OP AMP T0-99	03406	LF256H
A19U3	1902-0908	2	1	DIODE-ZNR 6.95V 5% TC=+.0002%	27014	LM399H
A19U4	1826-0229	6	1	IC OP AMP T0-99	06665	OP-05CJ
A19U5	1820-1196	8	3	IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A19U6	1820-1196	8		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A19U7	1820-1196	8		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	01295	8N74L8174N
A19U8	1826-0161	7	2	IC 324 OP AMP 14-DIP-P	18324	LM324-A
A19U9	1826-0161	7		IC 324 OP AMP 14-DIP-P	18324	LM324-A
A19VR1	1902-3203	6	2	DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
A19VR2				NOT ASSIGNED		
A19VR3	1902-3203	6		DIODE-ZNR 14.7V 5% DO-7 PD=.4W TC=+.057%	28480	1902-3203
				A19 MISCELLANEOUS PARTS		
	5000-9043	6	1	PIN&P.C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	BOARD EXTRACTOR	28480	5040-6843

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A20	85660-60133	8	1	BOARD ASSEMBLY, MAIN COIL DRIVER	28480	85660-60133
A20C1	0160-3451	1	7	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A20C2	0180-1731	8	1	CAPACITOR-FXD .47UF+-10% 50VDC TA	56289	1500475X905082
A20C3	0180-0116	1	2	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150085X903582
A20C4	0160-0574	3	1	CAPACITOR-FXD .022UF +-20% 100VDC CER	28480	0160-0574
A20C5	0180-0116	1	1	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150085X903582
A20C6	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A20C7	0180-2139	2	1	CAPACITOR-FXD 10UF+-20% 60VDC TA	06001	69F177G7
A20C8	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A20C9	0180-0291	3	1	CAPACITOR-FXD 1UF+-10% 35VDC TA	56289	1500105X9035A2
A20C10	0180-0229	7	1	CAPACITOR-FXD 33UF+-10% 10VDC TA	56289	1500336X901082
A20C11	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A20C12	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A20C13	0180-0197	8	1	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	1500225X9020A2
A20C14	0180-0228	6	1	CAPACITOR-FXD 22UF+-10% 15VDC TA	56289	1500226X901582
A20C15	0180-1746	5	1	CAPACITOR-FXD 15UF+-10% 20VDC TA	56289	1500156X902082
A20C16	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A20C17	0160-4442	2	1	CAPACITOR-FXD .15UF +-20% 100VDC CER	03122	5030-EM-100-RD-154M
A20C18	0160-3451	1	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-3451
A20C19	0160-3877	5	1	CAPACITOR-FXD 100PF +-20% 200VDC CER	28480	0160-3877
A20C20	0160-3878	6	1	CAPACITOR-FXD 1000PF +-20% 100VDC CER	28480	0160-3878
A20CR1	1901-0033	2	4	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A20CR2	1901-0040	1	5	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A20CR3	1901-0040	1	1	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A20CR4				NOT ASSIGNED		
A20CR5	1901-0033	2	1	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A20CR6	1901-0033	2	1	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A20CR7	1901-0033	2	1	DIODE-GEN PRP 180V 200MA DO-7	28480	1901-0033
A20CR8	1901-0040	1	1	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A20CR9	1901-0040	1	1	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A20CR10	1901-0040	1	1	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A20Q1	1854-0237	7	1	TRANSISTOR NPN SI TO-66 PD=20W FT=10MMH2	28480	1854-0237
A20Q2	1855-0413	3	1	TRANSISTOR J-FET P-CHAN D-MODE TO-18 SI	27014	2N5116
A20Q3				NOT ASSIGNED		
A20Q4	1854-0232	2	1	TRANSISTOR NPN SI TO-39 PD=1W FT=15MMH2	28480	1854-0232
A20Q5	1853-0038	4	1	TRANSISTOR PNP SI TO-39 PD=1W FT=10MMH2	28480	1853-0038
A20Q6	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A20Q7	1853-0007	7	2	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A20Q8	1854-0022	8	1	TRANSISTOR NPN SI TO-39 PD=700MW	07263	817843
A20Q9	1854-0475	5	1	TRANSISTOR-DUAL NPN PD=750MW	28480	1854-0475
A20Q10	1853-0007	7	1	TRANSISTOR PNP 2N3251 SI TO-18 PD=360MW	04713	2N3251
A20Q11	1853-0451	5	2	TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A20Q12	1853-0012	4	1	TRANSISTOR PNP 2N2904A SI TO-39 PD=600MW	01295	2N2904A
A20Q13	1853-0451	5	1	TRANSISTOR PNP 2N3799 SI TO-18 PD=360MW	01295	2N3799
A20R1				NOT ASSIGNED		
A20R2				NOT ASSIGNED		
A20R3	0757-0456	5	1	RESISTOR 43.2K 1% .125W F TC=0+-100	24546	C4-1/8-T0-4322-F
A20R4	0698-0492	1	1	RESISTOR 32.4K 1% .125W F TC=0+-100	24546	C4-1/8-T0-3242-F
A20R5	0757-0440	7	2	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A20R6	0757-0440	7	1	RESISTOR 7.5K 1% .125W F TC=0+-100	24546	C4-1/8-T0-7501-F
A20R7	0698-0083	8	1	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1961-F
A20R8	0698-3440	7	3	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A20R9	0757-0346	2	4	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A20R10	0757-0465	6	2	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A20R11	0698-3157	3	1	RESISTOR 19.6K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1962-F
A20R12	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1002-F
A20R13	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A20R14	0757-0401	0	2	RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-T0-101-F
A20R15	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4-1/8-T0-825R-F
A20R16	0811-3440	9	1	RESISTOR 125 1% 25W PW TC=0+-2	28480	0811-3440
A20R17	0698-3440	7	1	RESISTOR 196 1% .125W F TC=0+-100	24546	C4-1/8-T0-196R-F
A20R18	0757-0458	7	3	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5112-F
A20R19	0757-0465	6	1	RESISTOR 100K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1003-F
A20R20				NOT ASSIGNED		
A20R21				NOT ASSIGNED		
A20R22	0757-0290	5	1	RESISTOR 6.19K 1% .125W F TC=0+-100	19701	MF4C1/8-T0-6191-F
A20R23	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A20R24	0811-2936	6	1	RESISTOR 15 1% .5W PW TC=0+-5	14140	1251-1/4-C-15R-8
A20R25	2100-0635	3	2	RESISTOR-TRMR 2K 10% C SIDE-ADJ 20-TRN	28480	2100-0635
A20R26	0757-0438	3	2	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A20R27	0757-0438	3	1	RESISTOR 5.11K 1% .125W F TC=0+-100	24546	C4-1/8-T0-5111-F
A20R28	0757-0467	8	1	RESISTOR 121K 1% .125W F TC=0+-100	24546	C4-1/8-T0-1213-F
A20R29	0757-0346	2	1	RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-T0-10R0-F
A20R30	0698-8025	4	1	RESISTOR 1.91K .25% .125W F TC=0+-50	19701	MF4C1/8-T2-1911-C

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A20R31	0757-0402	1	1	RESISTOR 110 1% .125W F TC=0+-100	24546	C4-1/8-TO-111-F
A20R32	0757-0458	7		RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-5112-F
A20R33	0757-0428	1	1	RESISTOR 1.02K 1% .125W F TC=0+-100	24546	C4-1/8-TO-1021-F
A20R34	2100-0635	3		RESISTOR-TRM 2K 10% C SIDE-ADJ 20-TRN	28480	2100-0635
A20R35	0698-3153	9	1	RESISTOR 3.83K 1% .125W F TC=0+-100	24546	C4-1/8-TO-3831-F
A20R36	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4-1/8-TO-422R-F
A20R37	0757-0458	7		RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4-1/8-TO-5112-F
A20R38	0698-5673	2	1	RESISTOR 3.9K 1% .125W F TC=0+-25	28480	0698-5673
A20R39	0698-3155	1	1	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4-1/8-TO-4641-F
A20R40	0698-8420	3	1	RESISTOR 4.22K 1% .125W F TC=0+-25	19701	MF4C1/8-TO-4221-F
A20R41	0757-0401	0		RESISTOR 100 1% .125W F TC=0+-100	24546	C4-1/8-TO-101-F
A20R42	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4-1/8-TO-10R0-F
A20R43	0757-0436	1	1	RESISTOR 4.32K 1% .125W F TC=0+-100	03292	C4-1/8-TO-4321-F
A20R44	0698-6137	5	1	RESISTOR 328 1% .125W F TC=0+-100	03292	C4-1/8-TO-328R-F
A20R45	0698-5469	4	1	RESISTOR 8.668K 1% .125W F TC=0+-100	03292	C4-1/8-TO-8665R-F
A20R46	0757-0123	3	1	RESISTOR 34.8K 1% .125W F TC=0+-100	03292	C4-1/8-TO-3482-F
A20R47	0698-3162	9	1	RESISTOR 46.4K 1% .125W F TC=0+-100	03292	C4-1/8-TO-4642-F
A20TP1	1251-0600	0	5	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A20TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A20TP3	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A20TP4	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A20TP5	1251-0600	0		CONNECTOR-SGL CONT PIN 1.14-MM-BSC-82 SQ	28480	1251-0600
A20U1	1826-0092	3	1	IC OP AMP TO-99	28480	1826-0092
A20VP1	1902-0680	7	1	DIODE-ZNR 1N827 6.2V 5% DO-7 PD=.25W	24046	1N827
A20VR2	1902-3404	9	1	DIODE-ZNR 82.5V 5% DO-7 PD=.4W TC=+.082%	28480	1902-3404
				A20 MISCELLANEOUS PARTS		
	5000-9043	6	1	PIN/P.C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	BOARD EXTRACTOR	28480	5040-6843
	1205-0085	8	1	HEAT SINK TO-66-PKG	28480	1205-0085
	2190-0003	8	4	WASHER-LK HLCL NO. 4 .115-IN-ID	28480	2190-0003
	2200-0107	6	2	SCREW-MACH 4-40 .375-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
	1200-0173	5	4	INSULATOR-XSTR	28480	1200-0173
				(FOR Q4,Q5,Q8, AND Q12)		
	2200-0109	8	2	SCREW-MACH 4-40 .438-IN-LL PAN HO	00000	ORDER BY DESCRIPTION
	2260-0001	5	4	NUT-HEX-DBL-CHAM 4-40-TMD .094-IN-TMK	28480	2260-0001
	2190-0004	9	2	WASHER-LK HLCL NO.4 .115-IN-ID	28480	2190-0004

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A21	85660-60040	6	1	BOARD ASSEMBLY, FM COIL DRIVER	28480	85660-60040
A21C1	0160-3879	7	10	CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C2	0180-0234	4	1	CAPACITOR-FXD 33UF+-20% 75VDC TA	06001	69F286C7
A21C3	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C4	0180-1719	2	2	CAPACITOR-FXD 22UF+-10% 25VDC TA	06001	69F146G8
A21C5	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C6	0180-0116	1	1	CAPACITOR-FXD 6.8UF+-10% 35VDC TA	56289	150D685X903582
A21C7	0160-4441	1	1	CAPACITOR-FXD .47UF +-10% 50VDC CER	28480	0160-4441
A21C8	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C9	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C10	0180-0491	5	1	CAPACITOR-FXD 10UF+-20% 25VDC TA	28480	0180-0491
A21C11	0180-0197	8	2	CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A21C12	0180-0197	8		CAPACITOR-FXD 2.2UF+-10% 20VDC TA	56289	150D225X9020A2
A21C13	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C14	0160-4084	8	4	CAPACITOR-FXD .01UF +-20% 50VDC CER	28480	0160-4084
A21C15	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C16	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A21C17	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C18	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C19	0180-1719	2		CAPACITOR-FXD 22UF+-10% 25VDC TA	06001	69F146G8
A21C20	0160-3879	7		CAPACITOR-FXD .01UF +-20% 100VDC CER	28480	0160-3879
A21C21	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A21C22	0140-0194	1	1	CAPACITOR-FXD 110PF +-5% 300VDC MICA	72136	DN15F111J0300MV1CR
A21C23	0160-2206	2	1	CAPACITOR-FXD 160PF +-5% 300VDC MICA	28480	0160-2206
A21C24	0160-4084	8		CAPACITOR-FXD .1UF +-20% 50VDC CER	28480	0160-4084
A21CR1	1901-0040	1	2	DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A21CR2	1901-0040	1		DIODE-SWITCHING 30V 50MA 2N8 DO-35	28480	1901-0040
A21L1	9100-2259	8	1	COIL-MLD 1.5UH 10% Q=32 .095DX.25LG=NOM	28480	9100-2259
A21Q1	1854-0013	7	1	TRANSISTOR NPN 2N2218A SI TO-5 PD=800MW	04713	2N2218A
A21Q2	1854-0404	0	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0404
A21Q3	1854-0447	1	1	TRANSISTOR NPN 2N2222A SI TO-18 PD=200MW	28480	1854-0447
A21Q4	1853-0012	4	1	TRANSISTOR PNP 2N2904A SI TO-39 PD=600MW	01295	2N2904A
A21Q5	1854-0477	7	1	TRANSISTOR NPN 2N2222A SI TO-18 PD=500MW	07263	2N2222A
A21Q6	1854-0023	9	1	TRANSISTOR NPN SI TO-18 PD=360MW	28480	1854-0023
A21Q7	1854-0247	9	1	TRANSISTOR NPN SI TO-39 PD=1W FT=800MHZ	28480	1854-0247
A21Q8	1853-0050	0	1	TRANSISTOR PNP SI TO-18 PD=360MW	28480	1853-0050
A21R1	0757-0346	2	7	RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A21R2	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A21R3	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A21R4	0757-0401	0	1	RESISTOR 100 1% .125W F TC=0+-100	24546	C4=1/8-T0=101-F
A21R5	0757-0458	7	1	RESISTOR 51.1K 1% .125W F TC=0+-100	24546	C4=1/8-T0=5112-F
A21R6	0757-0441	8	3	RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4=1/8-T0=8251-F
A21R7	0698-0083	8	4	RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A21R8	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A21R9	0698-3155	1	3	RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A21R10	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A21R11	0698-3155	1		RESISTOR 4.64K 1% .125W F TC=0+-100	24546	C4=1/8-T0=4641-F
A21R12	0757-0416	7	1	RESISTOR 511 1% .125W F TC=0+-100	24546	C4=1/8-T0=511R=F
A21R13	0698-3150	6	1	RESISTOR 2.37K 1% .125W F TC=0+-100	24546	C4=1/8-T0=2371-F
A21R14	0757-0442	9	1	RESISTOR 10K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1002-F
A21R15	0757-0439	4	1	RESISTOR 6.81K 1% .125W F TC=0+-100	24546	C4=1/8-T0=6811-F
A21R16	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4=1/8-T0=8251-F
A21R17	0757-0447	4	1	RESISTOR 16.2K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1622-F
A21R18	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A21R19	0698-0083	8		RESISTOR 1.96K 1% .125W F TC=0+-100	24546	C4=1/8-T0=1961-F
A21R20	0757-0441	8		RESISTOR 8.25K 1% .125W F TC=0+-100	24546	C4=1/8-T0=8251-F
A21R21	0698-3438	3	1	RESISTOR 147 1% .125W F TC=0+-100	24546	C4=1/8-T0=147R=F
A21R22	0757-0194	0	1	RESISTOR 51.1 1% .125W F TC=0+-100	24546	C4=1/8-T0=51R1-F
A21R23	0698-3447	4	1	RESISTOR 422 1% .125W F TC=0+-100	24546	C4=1/8-T0=422R=F
A21R24	0698-3429	2	1	RESISTOR 19.6 1% .125W F TC=0+-100	03888	PME55-1/8-T0=19R6=F
A21R25	0757-0420	3	3	RESISTOR 750 1% .125W F TC=0+-100	24546	C4=1/8-T0=751-F
A21R26	0686-1825	3	1	RESISTOR 1.8K 5% .5W CC TC=0+-647	01121	E81825
A21R27	0757-0420	3		RESISTOR 750 1% .125W F TC=0+-100	24546	C4=1/8-T0=751-F
A21R28	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A21R29	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A21R30	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A21R31	0757-0346	2		RESISTOR 10 1% .125W F TC=0+-100	24546	C4=1/8-T0=10R0=F
A21R32	0757-0802	5	2	RESISTOR 162 1% .5W F TC=0+-100	28480	0757-0802
A21R33	0757-0802	5		RESISTOR 162 1% .5W F TC=0+-100	28480	0757-0802
A21R34	0698-3442	9	1	RESISTOR 237 1% .125W F TC=0+-100	24546	C4=1/8-T0=237R=F
A21R35	0757-0420	3		RESISTOR 750 1% .125W F TC=0+-100	24546	C4=1/8-T0=751-F

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A21TP1	1251-0600	0	2	CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A21TP2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-BSC-SZ SQ	28480	1251-0600
A21U1	1826-0261	8	1	IC 741 OP AMP TO-99	28480	1826-0261
				A21 MISCELLANEOUS PARTS		
	5000-9043	8	1	PINIP.C. BOARD EXTRACTOR	28480	5000-9043
	5040-6843	2	1	BOARD EXTRACTOR	28480	5040-6843
	1200-0173	5	2	INSULATOR-XSTR DAP-GL	28480	1200-0173
				(FOR Q1,Q4)		
	1205-0011	0	2	HEAT SINK TO-5/TO-39-PKG	28480	1205-0011
				(FOR Q1,Q4)		
	1205-0037	0	1	HEAT SINK TO-18-PKG	28480	1205-0037
				(FOR Q3)		

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
A22	85660-60046	2	1	10 MHz FREQUENCY STANDARD	28480	85660-60046
A22W1	85660-60094	0	1	CABLE ASSEMBLY, WIRE HARNESS, 5-WIRE (A22 TO A23J3)	28480	85660-60094
A23	85660-60041	7	1	BOARD ASSEMBLY, MOTHERBOARD (DOES NOT INCLUDE C1=C4,C7,Q1=Q4, U1,OR W1=W7)	28480	85660-60041
A23C1	0180-0452	8	1	CAPACITOR-FXD .013F+75-10% 25VDC AL	28480	0180-0452
A23C2	0180-0454	0	1	CAPACITOR-FXD 4200UF+75-10% 75VDC AL	28480	0180-0454
A23C3	0180-0453	9	1	CAPACITOR-FXD 8700UF+75-10% 40VDC AL	28480	0180-0453
A23C4	0180-2798	9	1	CAPACITOR-FXD .03F+100-10% 20VDC AL	28480	0180-2798
A23C5	0160-3879	7	1	CAPACITOR-FXD .01UF +20% 100VDC CER	28480	0160-3879
A23C6	0160-0127	2	1	CAPACITOR-FXD 1UF +20% 25VDC CER	28480	0160-0127
A23C7 (OPTION 400)	0170-0073	8	1	CAPACITOR-FXD 1UF +10% 600VDC POLYE (OPTION 400)	28480	0170-0073
A23CR1	1901-0743	1	1	DIODE-PWR RECT 1N4004 400V 1A DO-41	01295	1N4004
A23CR2	1901-0050	3	1	DIODE-SWITCHING 80V 200MA 2N3 DO-35	28480	1901-0050
A23D81	1990-0517	4	1	LED-VISIBLE LUM-INT=3MCD IF=20MA-MAX	28480	5082-4655
A23J1				PART OF A23N6		
A23J2	1251-5799	8	1	CONNECTOR 20-PIN M RECTANGULAR	28480	1251-5799
A23J3	86701-60069	1	1	CONNECTOR ASSEMBLY, 5-PIN	28480	86701-60069
A23J4				PART OF A23M1		
A23J5				PART OF A23W2		
A23J6				PART OF A23W3		
A23J7				PART OF A23W4		
A23J8				PART OF A23W7		
A23J9				PART OF A23W5		
A23K1	0490-0618	5	1	RELAY 2C 24VDC-COIL 5A 115VAC (FOR A24 FAN)	28480	0490-0618
A23L1	85660-80007	7	8	INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23L2	85660-80007	7		INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23L3	85660-80007	7		INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23L4	85660-80007	7		INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23L5	85660-80007	7		INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23L6	85660-80007	7		INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23L7	85660-80007	7		INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23L8	85660-80007	7		INDUCTOR, POWER SUPPLY FILTER	28480	85660-80007
A23P1	1251-0600	0	6	CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 80	28480	1251-0600
A23P2	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 80	28480	1251-0600
A23P3	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 80	28480	1251-0600
A23P4	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 80	28480	1251-0600
A23P5	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 80	28480	1251-0600
A23P6	1251-0600	0		CONNECTOR-SGL CONT PIN 1,14-MM-B8C-8Z 80	28480	1251-0600
A23Q1	1854-0618	8	2	TRANSISTOR NPN SI DARL TO-3 PD=150W	04713	MJ3000
A23Q2	1854-0294	6	1	TRANSISTOR NPN SI TO-3 PD=115W FT=500KHZ	28480	1854-0294
A23Q3	1854-0618	8		TRANSISTOR NPN SI DARL TO-3 PD=150W	04713	MJ3000
A23Q4	1854-0679	1	1	TRANSISTOR NPN 2N5085 SI TO-3 PD=200W	28480	1854-0679
A23R1	0757-0421	4	1	RESISTOR 825 1% .125W F TC=0+-100	24546	C4-1/8-T0-825R-F
A23R2	0687-3321	0	1	RESISTOR 3.3K 10% .5W CC TC=0+-647	01121	EB3321
A23R3	0683-7515	4	1	RESISTOR 750 5% .25W FC TC=400/+600	01121	CB7515
A23R4	0686-7525	2	1	RESISTOR 7.5K 5% .5W CC TC=0+-647	01121	EB7525
A23R5	0683-2225	3	1	RESISTOR 2.2K 5% .25W FC TC=400/+700	01121	CB2225
A23R6	0698-0084	9	1	RESISTOR 2.15K 1% .125W F TC=0+-100	24546	C4-1/8-T0-2151-F
A23R7	0698-7229	8	7	RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A23R8	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A23R9	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A23R10	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A23R11	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A23R12	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A23R13	0698-7229	8		RESISTOR 511 1% .05W F TC=0+-100	24546	C3-1/8-T0-511R-G
A23U1	1826-0423	4	1	IC V RGLTR TO-3	27014	LM317K
A23W1	85660-60070	2	1	CABLE ASSEMBLY, COAX 3 (A19 TO A16)	28480	85660-60070
A23W2	85660-60068	8	1	CABLE ASSEMBLY, COAX 84 (A19 TO A6A12)	28480	85660-60068
A23W3	85660-60069	9	1	CABLE ASSEMBLY, COAX 8 (A21 TO A11J1)	28480	85660-60069
A23W4	85660-60124	7	1	CABLE ASSEMBLY, COAX 7 (A21 TO A11A3) (MUST BE USED WITH A11A3 5086-7314)	28480	85660-60124
A23W5	8120-2800	6	1	CABLE ASSEMBLY, RIBBON, 16-WIRE (A23U9 TO A5A1J1)	28480	8120-2800

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-3. Replaceable Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number			
A23w6	8120-2804	0	1	CABLE ASSEMBLY, RIBBON, 26-WIRE (A23J1 TO A6A13J1)	28480	8120-2804			
A23w7	8120-2802	8	1	CABLE ASSEMBLY, RIBBON, 50-WIRE (A23J8 TO A5A1P1 AND A6A13J3)	28480	8120-2802			
A23xA8	1251-2026	8	11	CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA10A1	1251-2035	9	20	CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA10A2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA10A3	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA10A4	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA10A5	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA10A6	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA10A7	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA10A8	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA12P1	1251-5434	8	2	CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-5434			
A23XA12P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA12P3	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA13P1	1251-0472	4	1	CONNECTOR-PC EDGE 6-CONT/ROW 2-ROWS	28480	1251-0472			
A23XA13P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA13P3	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA14P1	1251-1365	6	2	CONNECTOR-PC EDGE 22-CONT/ROW 2-ROWS	28480	1251-1365			
A23XA14P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA15P1	1251-5434	8		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-5434			
A23XA15P2	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA15P3	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA16P1	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA16P2	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA17	1251-1365	6		CONNECTOR-PC EDGE 22-CONT/ROW 2-ROWS	28480	1251-1365			
A23XA18	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA19	1251-2026	8		CONNECTOR-PC EDGE 18-CONT/ROW 2-ROWS	28480	1251-2026			
A23XA20	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
A23XA21	1251-2035	9		CONNECTOR-PC EDGE 15-CONT/ROW 2-ROWS	28480	1251-2035			
				A23 MISCELLANEOUS PARTS					
				1251-2313	6	10	CONNECTOR-SGL CONT SKT .04-IN-88C-8Z RND	28480	1251-2313
A24 (STANDARD)	85660-60049	5	1	FAN ASSEMBLY (STANDARD)	28480	85660-60049			
A24 (OPTION 400)	85660-60116	7	1	FAN ASSEMBLY, 400 HZ (OPTION 400 ONLY)	28480	85660-60116			
				A24 MISCELLANEOUS PARTS					
				3160-0308	4	1	FAN-TBAX 120-CFM 115V 50/60-HZ 1.5-TMK (STANDARD)	28480	3160-0308
				3160-0087	6	1	FAN-TBAX 95-CFM 95-128V 47-440-HZ (OPTION 400 ONLY)	28480	3160-0087
				85660-00043	3	1	HOUSING GRILL	28480	85660-00043
				85660-00044	4	1	HOUSING, TOP	28480	85660-00044
				85660-00045	5	1	HOUSING, BOTTOM	28480	85660-00045
				85660-00046	6	1	BASE PLATE	28480	85660-00046
				85660-00047	7	1	SUPPORT PLATE	28480	85660-00047
				1520-0205	2	4	SHOCK MOUNT	28480	1520-0205
				85660-20092	4	4	SNUBBER (RETAINS ISOLATION MOUNT)	28480	85660-20092
				2360-0196	1	4	SCREW-MACH 6-32 .375-IN-LG 100 DEG (SECURES SNUBBER)	00000	ORDER BY DESCRIPTION
				0360-0268	6	2	TERMINAL-8LDR LUG LK-MTG FOR-#6-SCR	28480	0360-0268
				0890-0983	5	1	TUBING-HS .125-ID/.062-RCVD .02-WALL (OPTION 400 ONLY)	28480	0890-0983
				1400-0249	0	2	CABLE TIE .062-.025-DIA .091-WD NYL	28480	1400-0249
				2200-0105	4	8	SCREW-MACH 4-40 .312-IN-LG PAN-HD-POZI	00000	ORDER BY DESCRIPTION
				2200-0770	9	10	SCREW-MACH 4-40 .188-IN-LG 100 DEG	00000	ORDER BY DESCRIPTION
				2260-0003	7	4	NUT-HEX-PLSTC LKG 4-40-TMD .141-IN-TMK	00000	ORDER BY DESCRIPTION
				86701-00017	3	3	DISK, FAN, EMI SHIELD (OPTION 400 ONLY)	28480	86701-00017

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-4. IF-Display Section Miscellaneous Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
				IF-DISPLAY SECTION MISCELLANEOUS PARTS		
B1	3160-0298	1	1	FAN-SKL 72-CFM 115V 50/60/400-HZ 1.5-TMK (OPTION 400 ONLY)	28480	3160-0298
B1	3160-0296	9	1	FAN-SKL 72-CFM 115V 50/60-HZ 1.5-TMK (STANDARD)	28480	3160-0296
C1	0160-4065	5	1	CAPACITOR-FXD .1UF +/-20% 250VAC(RM8)	28480	0160-4065
C2	0160-2636	2	2	CAPACITOR-FXD 470PF +/-20% 3KVDC CER	28480	0160-2636
C3	0160-2636	2		CAPACITOR-FXD 470PF +/-20% 3KVDC CER	28480	0160-2636
F1	2110-0007	4	1	FUSE 1A 250V 8L0-8L0 1.25X.25 UL IEC	75915	313001
F1	2110-0006	3	1	FUSE 2A 250V 8L0-8L0 1.25X.25 UL	71400	MDX-2
FL1	0960-0448	6	1	LINE MODULE FILTER	05245	F1927
FL1				PART OF FL1 & NOT SEPARATELY REPLACEABLE		
J1	1251-3418	4	1	CONNECTOR 5-PIN F D SERIES (SEE A1A9J2)	28480	1251-3418
J2				PART OF W28		
J3				PART OF W29		
J4				PART OF W27		
J5						
J6				PART OF W32		
J7				PART OF W14		
J8				PART OF W13		
J9				PART OF W25		
J10				PART OF W26		
J11				PART OF W15		
				SEE A1A9K1		
T1				SEE A1T1		
T81	85662-60086	2	1	TERMINAL BOARD, PC 400HZ CAP(OPT 400)	28480	85662-60086
T81	0170-0073	8	1	CAPACITOR-FXD 1UF +/-10% 600VDC POLYE (OPTION 400 ONLY)	28480	0170-0073
V1				SEE A1V1		
W1	85662-60068	0	2	CABLE ASSEMBLY, A1A1 TO A1A10 (RIBBON CABLE, P/O A3 INTERCONNECT)	28480	85662-60068
W2	85662-60068	0		CABLE ASSEMBLY, A1A1 TO A1A10 (RIBBON CABLE, P/O A3 INTERCONNECT)	28480	85662-60068
W3	85662-60062	4	1	CABLE ASSEMBLY, A1A10 TO A3A10 (A3 POWER)	28480	85662-60062
W4	85662-60063	5		CABLE ASSEMBLY, A1A10 TO A4A10	28480	85662-60063
W5	85662-60073	7		CABLE ASSEMBLY, A1A10 TO A1A9	28480	85662-60073
W6	85662-60064	6		CABLE ASSEMBLY, A1A4 TO A1V1 (X-DEFL)	28480	85662-60064
W7	85662-60064	2		CABLE ASSEMBLY, A1A5 TO A1V1 (Y-DEFL)	28480	85662-60064
W8	85662-60028	2		CABLE ASSEMBLY, (INST, BUS)	28480	85662-60028
W9	85662-60066	8		CABLE ASSEMBLY, A1A10 TO A3A10 (RIBBON CABLE)	28480	85662-60066
W10				NOT ASSIGNED		
W11	85662-60043	1	2	CABLE ASSEMBLY, COAX 9, A3A9 TO A3A2 (VIDEO)	28480	85662-60043
W12	85662-60043	1		CABLE ASSEMBLY, COAX 9, A4A1 TO A3A9 (VIDEO)	28480	85662-60043
W13	85662-60103	4	1	CABLE ASSEMBLY, COAX 1, A4A1 TO REAR PANEL J8 (RECORDER VIDEO)	28480	85662-60103
W14	85662-60102	3	1	CABLE ASSEMBLY, COAX 3, A4A1 TO REAR PANEL J7 (RECORDER SNEEP)	28480	85662-60102
W15	85662-60104	5	1	CABLE ASSEMBLY, COAX 2, A4A2 TO REAR PANEL J11 (21.4MHZ IF OUTPUT)	28480	85662-60104
W16	85662-60032	8	1	CABLE ASSEMBLY, COAX 0, REAR	28480	85662-60032
W17	85662-60033	9	1	CABLE ASSEMBLY, COAX 93, REAR PANEL J1 TO A4A1 (AUX SNEEP INPUT)	28480	85662-60033
W18	85662-60031	7	1	CABLE ASSEMBLY, COAX 6, A4A2 TO REAR PANEL J1 (COUNTER OUTPUT)	28480	85662-60031
W19	85662-60030	6	1	CABLE ASSEMBLY, COAX 97, REAR PANEL A1 TO A4A8 (21.4MHZ IF INPUT)	28480	85662-60030
W20	85662-60042	0	1	CABLE ASSEMBLY, COAX 8, A4A6A2 TO A4A6A1 (3MHZ BYPASS)	28480	85662-60042
W21	85662-60070	4	1	CABLE ASSEMBLY, A1A3 TO A1V1 (CRT REAR CONNECTOR)	28480	85662-60070
W22				NOT ASSIGNED		
W23	85662-60029	3	1	CABLE ASSEMBLY, COAX 1, A3A10 TO A1A10 (X-DEFLECTION)	28480	85662-60029

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-4. IF-Display Section Miscellaneous Parts (Cont'd)

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
W24	85662-60039	5	1	CABLE ASSEMBLY, COAX 1, A3A10 TO A1A10 (Y-DEFLECTION)	28480	85662-60039
W25	85662-60037	3	1	CABLE ASSEMBLY, COAX 84, A1A10 TO REAR PANEL J10 (EXTERNAL TRIGGER)	28480	85662-60037
W26	85662-60038	4	1	CABLE ASSEMBLY, COAX 85, A1A10 TO REAR (PANEL J10 (EXTERNAL TRIGGER)	28480	85662-60038
W27	85662-60036	2	1	CABLE ASSEMBLY, COAX 82, A1A10 TO REAR PANEL J5 (DISPLAY OUTPUT Z)	28480	85662-60036
W28	85662-60034	0	1	CABLE ASSEMBLY, COAX 83, A1A10 TO REAR PANEL J3 (DISPLAY OUTPUT X)	28480	85662-60034
W29	85662-60035	1	1	CABLE ASSEMBLY, COAX 81, A1A10 TO REAR PANEL J4 (DISPLAY OUTPUT Y)	28480	85662-60035
W30	85662-60093	1	1	CABLE ASSEMBLY, IF-DISPLAY SECTION TO RF SECTION (COAX INTERCONNECT)	28480	85662-60093
W31	85662-60094	2	1	CABLE ASSEMBLY, IF-DISPLAY SECTION TO RF SECTION (INST. BUS INTERCONNECT)	28480	85662-60094
W32	85662-60044	2	1	CABLE ASSEMBLY, COAX 86, A1A10 TO REAR PANEL J6 (DISPLAY OUTPUT BLANK)	28480	85662-60044

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-5. RF Section Miscellaneous Parts

Reference Designation	HP Part Number	C D	Qty	Description	Mfr Code	Mfr Part Number
				RF SECTION MISCELLANEOUS PARTS		
AT1	1810-0118	1	1	TERMINATION=COAX SMA (TERMINATES 1ST LO OUTPUT)	28480	1810-0118
B1				FAN (SEE A24)		
C1				FILTER CAPACITOR,(SEE A23C1)		
C2				FILTER CAPACITOR,(SEE A23C2)		
C3				FILTER CAPACITOR,(SEE A23C3)		
C4				FILTER CAPACITOR,(SEE A23C4)		
F1	2110-0055	2	1	FUSE 4A 250V FAST-BLO 1,25X,25 UL IEC (FOR 100/120 VOLT OPERATION)	75915	312004
F1	2110-0006	3	1	FUSE 2A 250V SLO-BLO 1,25X,25 UL (FOR 220/240 VOLT OPERATION)	71400	MDX-2
FL1				LINE MODULE (SEE A9)		
J1	1251-3418	4	1	CONNECTOR 5-PIN F D SERIES (IF/SWEEP)	28480	1251-3418
J2				PART OF W6		
J3				PART OF W12		
J4				PART OF W3		
J5				PART OF W16		
K1				FAN RELAY (SEE A23K1)		
S1	3101-0070	3	1	SWITCH=SL DPDT=NS MINTR .5A 125VAC/DC (FREQ REFERENCE INT=EXT)	28480	3101-0070
T1	85660-60048	4	1	TRANSFORMER, POWER, AC LINE	28480	85660-60048
W1	85660-60066	6	1	CABLE ASSEMBLY, COAX 81, A6A3 LAST CONV TO REAR PANEL J1P1	28480	85660-60066
W2	85660-60073	5	1	CABLE ASSEMBLY, COAX 85, A7A2 100 MHZ VCXO TO A6A9 PHASE LOCK	28480	85660-60073
W3	85660-60063	3	1	CABLE ASSEMBLY, COAX 82, A6A12 YTX DRIVER TO REAR PANEL J4(SWEEP + TUNE)	28480	85660-60063
W4	85660-60076	6	1	CABLE ASSEMBLY, COAX 9,A7A1 REF. 0=DET TO A10A7 PLL2-DIVIDER	28480	85660-60076
W5	85660-60077	9	1	CABLE ASSEMBLY, COAX 86, A7A1 REF. 0=DET TO A10A2 PLL1-DIVIDER	28480	85660-60077
W6	85660-60078	0	1	CABLE ASSEMBLY, COAX 80, REAR PANEL J2 (FREQ. REFERENCE EXT)TO A7A1 REF.0=DET	28480	85660-60078
W7	85660-60075	7	1	CABLE ASSEMBLY, COAX 8, A7A2 100MHZ VCXO TO A10A4 PLL3-UP-CONV	28480	85660-60075
W8	85660-60072	4	1	CABLE ASSEMBLY, COAX 93, A7A4 MIN OUTPUT TO A11A5 SAMPLER	28480	85660-60072
W9	85660-60074	6	1	CABLE ASSEMBLY, COAX 5, A10A1 PLL1-VCO TO A11A4 PHASE DET.	28480	85660-60074
W10				NOT ASSIGNED		
W11	85660-20067	3	1	CABLE ASSEMBLY, A11A1 DIR. CPLR TO A6W6.	28480	85660-20067
W12	85660-60062	2	1	CABLE ASSEMBLY, COAX 87, A22 10MHZ STD; TO REAR PANEL J3 (FREQ. REFERENCE INT)	28480	85660-60062
W13	85660-60065	5	1	CABLE ASSEMBLY, COAX 4,A14 SCAN GEN. TO REAR PANEL J1P3	28480	85660-60065
W14	85660-60064	4	1	CABLE ASSEMBLY, COAX 1,A14 SCAN GEN. TO REAR PANEL J1P4	28480	85660-60064
W15	85660-60117	6	1	CABLE ASSEMBLY, REAR PANEL J2 (FREQ. REFERENCE INT) TO REAR PANEL J3 (FREQ. REFERENCE EXT)	28480	85660-60117
W16	85660-60067	7	1	CABLE ASSEMBLY, COAX 6, A7A1 REF.0=DET. TO REAR PANEL J5(10MHZ OUT)	28480	85660-60067
	85660-90016	9	1	INFORMATION CARD,ENGLISH (MANUAL OPERATION)	28480	85660-90016
	85660-90017	0	1	INFORMATION CARD,ENGLISH (REMOTE OPERATION)	28480	85660-90017
	5061-2033	8	1	TRAY ASSEMBLY, INFORMATION PULL-OUT CARD	28480	5061-2033

See introduction to this section for ordering information
 *Indicates factory selected value

Table 6-6. Rack Mount and Handle Kits

Item	HP Part Number	C D	Description	Mfr. Code	Manufacturer's Part Number
1	5061-0089	Ø	Front Handle Kit — contains a pair of 5 1/4 inch high handles and necessary hardware	28480	5061-0089
2	5061-0077	6	Rack Mount Kit — contains a pair of 5 1/4 inch high flanges and necessary hardware	28480	5061-0077
3	5061-0083	4	Rack Mount Kit with Front Handles — contains a pair of 5 1/4 inch high handles, a pair of 5 1/4 inch high flanges, and necessary hardware	28480	5061-0083
4	1494-0016	6	Slide Adapter Kit — contains a pair of 20 inch deep slides and necessary hardware	28480	1494-0016
5	5061-0086	7	Rack Mount Kit with Front Handles — contains a pair of 10 1/2 inch high handles, a pair of 10 1/2 inch high flanges, and necessary hardware (to be used with Slide Adapter Kit)	28480	5061-0086

SECTION VII MANUAL BACKDATING CHANGES

7-1. INTRODUCTION

7-2. This manual has been written for and applies directly to instruments with serial numbers prefixed as indicated on the title page. Earlier versions of the instrument (serial number prefixes lower than the one indicated on the title page) may be slightly different in design or appearance. The purpose of this section of the manual is to document these differences. With the information provided in this section, this manual can be corrected so that it applies to any earlier version or configuration of the instrument. Later versions of the instrument (serial number prefixes higher than the one indicated on the title page) are documented in a yellow Manual Changes Supplement.

7-3. To adapt this manual to your instrument, refer to Table 7-1 and make all manual changes listed opposite your instrument serial number. There are two columns in Table 7-1. One column is for the RF Section and the other column is for the IF-Display Section. Perform all changes for both sections of your instrument in the sequence indicated.

NOTE

The information provided here is intended to document older instruments. Do not confuse this information with that contained in the yellow Manual Changes Supplement which is intended to document newer instruments.

Table 7-1. Manual Backdating Changes by Serial Number

RF SECTION		IF-DISPLAY SECTION	
Serial Prefix or Number	Perform Manual Changes	Serial Prefix or Number	Perform Manual Changes
1947A	1	1924A	12
1939A	1, 2	1922A	12, 13
1925A00271 through 1925A00330	1, 2, 3	1918A	12, 13, 14
		1915A	12, 13, 14, 15
1925A00251 through 1925A00270	1, 2, 3, 4	1906A	12, 13, 14, 15, 16
		1901A	12, 13, 14, 15, 16, 17
1921A	1, 2, 3, 4, 5	1849A	12, 13, 14, 15, 16, 17, 18
1918A	1, 2, 3, 4, 5, 6	1838A	12, 13, 14, 15, 16, 17, 18, 19
1904A00181 through 1904A00210	1, 2, 3, 4, 5, 6, 7	1833A	12, 13, 14, 15, 16, 17, 18, 19, 20
		1826A	12, 13, 14, 15, 16, 17, 18, 19, 20, 21
1904A00161 through 1904A00180	1, 2, 3, 4, 5, 6, 7, 8	1823A	12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22
		1820A	12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23
1901A	1, 2, 3, 4, 5, 6, 7, 8, 9	1811A	12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
1842A	1, 2, 3, 4, 5, 6, 7, 8, 9, 10		
1827A	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1805A	12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25
		1745A	12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26
		1721A	12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27

7-4. CHANGE INSTRUCTIONS FOR RF SECTIONS

7-5. Change 1 (RF Sections Prefixed 1947A)

Volume 2

Section VI-Replaceable Parts

Page 6-118, Table 6-3:

Change HP Part Number and Mfr Part Number of A7A3 to 85660-60017; CD to 7.

Page 6-162, Table 6-3:

Change HP Part Number and Mfr Part Number of A18 to 85660-60037; CD to 1.

Delete A18C16 entry.

Page 6-163, Table 6-3:

Delete A18R47 entry.

Volume 4

Section IX-RF Section Service

A7A3 M/N Phase Detector

Page 9-199, Table 9-29:

Change HP Part Number and Mfr Part Number of A7A3 to 85660-60017; CD to 7.

Page 9-203/9-204, Figure 9-79:

In upper left corner of schematic, change HP Part Number to 85660-60017.

In lower left corner of schematic, change serial prefix to 1947A.

Replace Block **F** with Figure 7-1.

A18 Negative Regulator

Page 9-426, Table 9-61:

Change HP Part Number and Mfr Part Number of A18 to 85660-60037; CD to 1.

Delete A18C16 entry.

Page 9-427, Table 9-61:

Delete A18R47 entry.

Page 9-428, Figure 9-152:

Delete C16 and R47 from location diagram.

Page 9-429/9-430, Figure 9-153:

In upper left corner of schematic, change HP Part Number to 85660-60037.

In lower left corner of schematic, change serial prefix to 1947A.

In center left of schematic, change function block column for P1-10,28 to NC.

Replace Block **C** with Figure 7-2.

7-6. Change 2 (RF Sections Prefixed 1939A)

Volume 2

Section VI-Replaceable Parts

Page 6-157, Table 6-3:

Change HP Part Number and Mfr Part Number of A16 to 85660-60034; CD to 8.

Add A16C20 entry as follows:

A16C20, 0180-0291,3,2,CAPACITOR – FXD 1UF $\pm 10\%$ 35VDC TA,56289,150D105X9035A2.

Add A16R3 entry as follows:

A16R3,0757-0416,7,2,RESISTOR 511 1% .125W F TC=0 ± 100 ,24546,C4-1/8-TO-511R-F.

Page 6-158, Table 6-3:

Delete A16R14, A16R36, and A16R37 entries.

Volume 4

Section IX-RF Section Service

A16 Scan Generator

Page 9-407, Table 9-59:

Change HP Part Number and Mfr Part Number of A16 to 85660-60034.

Add A16C20 entry as follows:

A16C20,0180-0291,3,2,CAPACITOR – FXD 1UF $\pm 10\%$ 35VDC TA,56289,150D105X9035A2.

Add A16R3 entry as follows:

A16R3, 0757-0416,7,2,RESISTOR 511 1% .125W F TC=0 ± 100 ,24546,C4-1/8-TO-511R-F.

Page 9-408, Table 9-59:

Delete A16R14, A16R36, and A16R37 entries.

Page 9-411, Figure 9-146:

Add C16 in lower left of diagram to the left of U14.

Add R3 in lower left of diagram to the right of U16.

Delete R14.

Delete R36.

Delete R37.

Page 9-415/9-416, Figure 9-149:

In upper left corner of schematic, change HP Part Number to 85660-60034.

In lower left corner of schematic, change serial prefix to 1939A.

Replace Block  with Figure 7-3.

Replace Block  with Figure 7-4.

7-7. Change 3 (RF Sections Prefixed 1925A)

Volume 2

Section VI-Replaceable Parts

Page 6-115, Table 6-3:

Change HP Part Number and Mfr Part Number of A7A2 to 85660-60016; CD to 6.

7-7. Change 3 (RF Sections Prefixed 1925A) (Cont'd)

Volume 4

Section IX-RF Section Service

A7A2 100 MHz VCXO

Page 9-187, Table 9-26:

Change HP Part Number and Mfr Part Number to 85660-60016; CD to 6.

Page 9-191/9-192, Figure 9-73:

In upper left corner of schematic, change HP Part Number to 85660-60016.

In lower left corner of schematic, change serial prefix to 1925A.

7-8. CHANGE 4 (RF Sections Prefixed 1925A With Serial Numbers Lower Than 00271)

Volume 2

Section VI-Replaceable Parts

Page 6-99, Table 6-3:

Change A6A9A1C35 entry as follows:

A6A9A1C35,0160-3878,6, ,CAPACITOR-FXD 1000PF $\pm 20\%$ 100VDC CER,28480,0160-3878.

Page 6-100, Table 6-3:

Change A6A9A1R28 entry as follows:

A6A9A1R28,0698-7236,7,2,RESISTOR 1K 1% .05W F TC=0 ± 100 ,24546,C3-1/8-TO-1001-G.

Change A6A9A1R37 entry as follows:

A6A9A1R37,0757-0420,3,1,RESISTOR 750 1% .125W F TC=0 ± 100 ,24546,C4-1/8-TO-751-F.

Page 6-101, Table 6-3:

Delete A6A9A1R68 entry.

Volume 4

Section IX-RF Section Service

A6A9 Phase Lock

Page 9-124, Table 9-10:

Change A6A9A1C35 entry as follows:

A6A9A1C35,0160-3878,6, ,CAPACITOR-FXD 1000PF $\pm 20\%$ 100VDC CER,28480,0160-3878.

Page 9-125, Table 9-10:

Change A6A9A1R28 entry as follows:

A6A9A1R28,0698-7236,7,2,RESISTOR 1K 1% .05W F TC=0 ± 100 ,24546,C3-1/8-TO-1001-G.

Change A6A9A1R37 entry as follows:

A6A9A1R37,0757-0420,3,1,RESISTOR 750 1% .125W F TC=0 ± 100 ,24546,C4-1/8-TO-751-F.

Page 9-126, Table 9-10:

Delete A6A9A1R68 entry.

Page 9-131/9-132, Figure 9-45:

In lower left corner of schematic, change serial prefix to 1925A.

Replace Block **A** and applicable portion of Block **D** with Figure 7-5.

7-9. Change 5 (RF Sections Prefixed 1921A)

Volume 2

Section VI-Replaceable Parts

Page 6-136, Table 6-3:

Change A10A5R2, A10A5R3, and A10A5R4 entries as follows:

A10A5R2,2100-3352,7,2,RESISTOR-TRMR 1K 10% C SIDE-ADJ 1-TRN,28480,2100-3352.

A10A5R3,0698-0085,0,,RESISTOR 2.61K 1% .125W F TC=0 ± 100,24546,C4-1/8-TO-2611-F.

A10A5R4,2100-3352,7,,RESISTOR-TRMR 1K 10% C SIDE-ADJ 1-TRN,28480,2100-3352.

Page 6-141, Table 6-3:

Change A10A8 HP Part Number and Mfr Part Number to 85660-60029; CD to 1.

Change A10A8C16 entry as follows:

A10A8C16,0160-4604,8,1,CAPACITOR-FXD 4.3PF ± .25PF 500VDC CER,28480,0160-4604.

Page 6-142, Table 6-3:

Delete A10A8R50, A10A8TP6, and A10A8TP7 entries.

Volume 4

Section IX-RF Section Service

A10A5 PLL2 VCO

Page 9-273/9-274, Table 9-41:

Change A10A5R2, A10A5R3, and A10A5R4 entries as follows:


A10A5R2,2100-3352,7,2,RESISTOR-TRMR 1K 10% C SIDE-ADJ 1-TRN,28480,2100-3352.

A10A5R3,0698-0085,0,,RESISTOR 2.61K 1% .125W F TC=0 ± 100,24546,C4-1/8-TO-2611-F.

A10A5R4,2100-3352,7,,RESISTOR-TRMR 1K 10% C SIDE-ADJ 1-TRN,28480,2100-3352.

Page 9-277/9-278, Figure 9-106:

In lower left corner of schematic, change serial prefix to 1921A.

In Block  , change value of R2 to 1000, R3 to 2610, and R4 to 1000.

A10A8 PLL2 Discriminator

Page 9-297, Table 9-44:

Change A10A8 HP Part Number and Mfr Part Number to 85660-60029; CD to 1.

Change A10A8C16 entry as follows:

A10A8C16,0160-4604,8,1,CAPACITOR-FXD 4.3PF ± .25PF 500VDC CER,28480,0160-4604.

Page 9-298, Table 9-44:

Delete A10A8R50, A10A8TP6, and A10A8TP7 entries.


Page 9-300, Figure 9-114:

Delete R50, TP6, and TP7 from location illustration.


Page 9-301/9-302, Figure 9-94:

In upper left corner of schematic, change HP Part Number to 85660-60029.

In lower left corner of schematic, change serial prefix to 1921A.

In Block  , change value of C16 to 4.3pF.

In Block  , delete TP7.

In Block  , delete TP6 and R50.

7-10. Change 6 (RF Sections Prefixed 1918A)

Volume 2

Section VI-Replaceable Parts

Page 6-130, Table 6-3:

Change A10A3C23 HP Part Number and Mfr Part Number to 0160-3873 (CD to 1) and value to 4.7PF.

Page 6-137, Table 6-3:

Change A10A6 HP Part Number and Mfr Part Number to 85660-60027; CD to 9.

Page 6-138, Table 6-3:

Change A10A6VR1 entry as follows:

A10A6VR1, 1902-3059, 0, 1, DIODE-ZNR 3.83 V 5% DO-7 PD = .4 W
TC = -.051%, 28480, 1902-3059.

Page 6-166, Table 6-3:

Change A20 HP Part Number and Mfr Part Number to 85660-60039; CD to 3.

Change A20C17 entry as follows:

A20C17, 0160-4256, 6, 1, CAPACITOR-FXD .047UF $\pm 20\%$ 200VDC CER, 16546, CW30 B 473M.

Delete A20CR9 and A20CR10 entries.

Page 6-167, Table 6-3:

Delete the following entries:

A20R43, A20R44, A20R45, A20R46, and A20R47.

Volume 4

Section IX-RF Section Service

A10A3 PLL1 IF

Page 9-254, Table 9-39:

Change A10A3C23 HP Part Number and Mfr Part Number to 0160-3873 (CD to 1) and value to 4.7PF.

Page 9-259/9-260, Figure 9-100:

In Block **D**, change value of C23 to 4.7pF.

A10A6 PLL2 Phase Detector

Page 9-281, Table 9-42:

Change A10A6 HP Part Number and Mfr Part Number to 85660-60027; CD to 9.

Page 9-282, Table 9-42:

Change A10A6VR1 entry as follows:

A10A6VR1, 1902-3059, 0, 1, DIODE-ZNR 3.83 V 5% DO-7 PD = .4 W
TC = -.051%, 28480, 1902-3059.

Page 9-284, Figure 9-108:

Add VR1 to location illustration between R33 and R29 with anode towards bottom of PC board.

Page 9-285/9-286, Figure 9-109:

In upper left corner of schematic, change HP Part Number to 85660-60027.

In lower left corner of schematic, change serial prefix to 1918A.

Replace Block **A** with Figure 7-6.

7-10. Change 6 (RF Sections Prefixed 1918A) (Cont'd)

A20 Main Coil Driver

Page 9-441, Table 9-63:

Change A20 HP Part Number and Mfr Part Number to 85660-60039; CD to 3.

Change A20C17 entry as follows:

A20C17,0160-4256,2,1,CAPACITOR-FXD .047UF $\pm 20\%$ 200VDC CER,16546,CW30 B 473M.

Delete A20CR9 and A20CR10 entries.

Page 9-442, Table 9-63:

Delete the following entries:

A20R43, A20R44, A20R45, A20R46, and A20R47.

Page 9-444, Figure 9-158:

Delete R43 through R47 from the location illustration.

Page 9-445/9-446, Figure 9-159:

In upper left corner of schematic, change HP Part Number to 85660-60039.

In lower left corner of schematic, change serial prefix to 1918A.

Replace Block **B** with Figure 7-7.

In Block **C**, change value of C17 to .047UF.

7-11. Change 7 (RF Sections Prefixed 1904A)

Volume 1

Section I-General Information

Page 1-11, Table 1-2:

Change second to last entry under Frequency Response to read 18.6–22 GHz and delete last entry (20–22 GHz).

Volume 2

Section IV-Performance Tests

Page 4-34, Paragraph 4-20:

Under **SPECIFICATION**, change second to last entry to read 18.6–22 GHz and delete last entry.

Page 4-47, Paragraph 4-20:

Change last line of Step 67 to read as follows:

The resultant response plot or tabulated values must be $\leq \pm 2.2\text{dB}$ (4.4dB) for 18.6–22 GHz.

Section V-Adjustments

Page 5-129, Paragraph 5-35:

Change first line of Step 122 to read as follows:

Total deviation from the power level plotted on the CRT should be less than 4.4dB for 18.6 to 22 GHz.

Section VI-Replaceable Parts

Page 6-102, Table 6-3:

Change A6A10Q11 entry as follows:

A6A10Q11,1853-0314,9,1,TRANSISTOR PNP 2N2905A SI TO-39 PD=600MW,04713,2N2905A.

7-11. Change 7 (RF Sections Prefixed 1904A) (Cont'd)

Page 6-125, Table 6-3:

Change A10A1 HP Part Number and Mfr Part Number to 85660-60022; CD to 4.

Page 6-136, Table 6-3:

Change A10A5R20 entry as follows:

A10A5R20,0757-0399,5,1,RESISTOR 82.5 1% .125W F TC=0±100,24546,C4-1/8-TO-825R-F.

Change A10A5R21 entry as follows:

A10A5R21,0757-0400,9,1,RESISTOR 90.9 1% .125W F TC=0±100,24546,C4-1/8-TO-90R9-F.

Page 6-155, Table 6-3:

Change A15 HP Part Number and Mfr Part Number to 85660-60043; CD to 9.

Change A15R5 entry as follows:

A15R5,0757-0442,9,6,RESISTOR 10K 1% .125W F TC=0±100,24546,C4-1/8-TO-1002-F.

Volume 4

Section IX-RF Section Service

A6A10 Miscellaneous Bias/Relay Driver

Page 9-135, Table 9-11:

Change A6A10Q11 entry as follows:

A6A10Q11,1853-0314,9,1,TRANSISTOR PNP 2N2905A SI TO-39 PD=600MW,04713,2N2905A.

A10A1 PLL1 VCO

Page 9-238, Table 9-37:

Change A10A1 HP Part Number and Mfr Part Number to 85660-60022; CD to 4.

Page 9-243/9-244, Figure 9-94:

In upper left corner of schematic, change HP Part Number to 85660-60022.

In lower left corner of schematic, change serial prefix to 1904A.

Replace Block **E** with Figure 7-8.

In Block **F**, change U1R3 to U1R4 and pin numbers to 1 and 5.

A10A5 PLL2 VCO

Page 9-273/9-274, Table 9-41:

Change A10A5R20 entry as follows:

A10A5R20,0757-0399,5,1,RESISTOR 82.5 1% .125W F TC=0±100,24546,C4-1/8-TO-82R5-F.

Change A10A5R21 entry as follows:

A10A5R21,0757-0400,9,1,RESISTOR 90.9 1% .125W F TC=0±100,24546,C4-1/8-TO-90R9-F.

Page 9-277/9-278, Figure 9-106:

In Block **C**, change value of R20 to 82.5 and R21 to 90.9.

A15 Processor

Page 9-347, Table 9-58:

Change A15 HP Part Number and Mfr Part Number to 85660-60043; CD to 9.

Change A15R5 entry as follows:

A15R5,0757-0442,9,6,RESISTOR 10K 1% .125W F TC=0±100,24546,C4-1/8-TO-1002-F.

7-11. Change 7 (RF Sections Prefixed 1904A) (Cont'd)

Page 9-403/9-404, Figure 9-145:

In upper left corner of schematic, change HP Part Number to 85660-60043.

In lower left corner of schematic, change serial prefix to 1904A.

Change Block **C** as shown in Figure 7-9.

7-12. Change 8 (RF Sections Prefixed 1904A With Serial Numbers Lower Than 00181)

Volume 2

Section VI-Replaceable Parts

Page 6-101, Table 6-3:

Change A6A9A1R62 entry as follows:

A6A9A1R62,0698-7224,3, ,RESISTOR 316 1% .05W F TC=0±100,24546,C3-1/8-TO-316R-G.

Page 6-115, Table 6-3:

Change A7A2CR1 entry as follows:

A7A2CR1,0122-0245,5,1,DIODE-VVC 1N5139 6.8PF 10%,04713,1N5139.

Volume 4

Section IX-RF Section Service

A6A9 Phase Lock

Page 9-126, Table 9-10:

Change A6A9A1R62 entry as follows:

A6A9A1R62,0698-7224,3, ,RESISTOR 316 1% .05W F TC=0±100,24546,C3-1/8-TO-316R-G.

Page 9-131/9-132, Figure 9-45:

In Block **H** , change value of R62 to 316 ohms.

A7A2 100 MHz VCXO

Page 9-187, Table 9-26:

Change A7A2CR1 entry as follows:

A7A2CR1,0122-0245,5,1,DIODE-VCC 1N5139 6.8PF 10%,04713,1N5139.

Page 9-191/9-192, Figure 9-73:

In Block **A** , change value of CR1 to 6.8pF.

7-13. Change 9 (RF Sections Prefixed 1901A)

Volume 2

Section VI-Replaceable Parts

Page 6-159, Table 6-3:

Change A16U8 and A16U13 entries as follows:

A16U8,1826-0319,7,2,IC OP AMP TO-99,27014,LF356H.

A16U13,1826-0319,7, ,IC OP AMP TO-99,27014,LF356H.

7-13. Change 9 (RF Sections Prefixed 1901A) (Cont'd)

Page 6-165, Table 6-3:

Change A19U2 entry as follows:

A19U2,1826-0319,7,1,IC OP AMP TO-99,27014,LF356H.

Volume 4

Section IX-RF Section Service

A16 Scan Generator

Page 9-409/9-410, Figure 9-59:

Change A16U8 and A16U13 entries as follows:

A16U8,1826-0319,7,2,IC OP AMP TO-99,27014,LF356H.

A16U13,1826-0319,7, ,IC OP AMP TO-99,27014,LF356H.

A19 Digital-to-Analog Converter

Page 9-434, Table 9-62:

Change A19U2 entry as follows:

A19U2,1826-0319,7,1,IC OP AMP TO-99,27014,LF356H.

7-14. Change 10 (RF Sections Prefixed 1842A)

Volume 2

Section VI-Replaceable Parts

Page 6-168, Table 6-3:

Change A21Q3 entry as follows:

A21Q3,1854-0238,8,1,TRANSISTOR NPN 2N3933 SI TO-72 PD = 200MW,28480,1854-0238.

Volume 4

Section IX-RF Section Service

A21 FM Coil Driver

Page 9-449, Table 9-64:

Change A21Q3 entry as follows:

A21Q3,1854-0238,8,1,TRANSISTOR NPN 2N3933 SI TO-72 PD = 200MW,28480,1854-0238.

7-15. Change 11 (RF Sections Prefixed 1827A)

Volume 2

Section VI-Replaceable Parts

Page 6-4, Figure 6-1:

Change item 9 HP Part Number and Mfr Part Number to 85660-00030; CD to 8.

Page 6-15, Figure 6-7:

Change item 32 HP Part Number and Mfr Part Number to 85660-00030; CD to 8.

7-15. Change 11 (RF Sections Prefixed 1827A) (Cont'd)

Page 6-16, Figure 6-7:

Change item ③ HP Part Number and Mfr Part Number to 85660-00029; CD to 5.

Page 6-93, Table 6-3:

Change A6W8 HP Part Number and Mfr Part Number to 85660-20083; CD to 3.

Page 6-97, Table 6-3:

Change A6A7 HP Part Number and Mfr Part Number to 85660-60006; CD to 4.

Change A6A7Q8 entry as follows:

A6A7Q8,1884-0073,2,1,THYRISTOR-SCR TO-5 VRRM = 100,28480,1884-0073.

Delete A6A7R20 and A6A7R21 entries.

Change A6A7VR1 entry as follows:

A6A7VR1,1902-3082,9,1,DIODE-ZNR 4.64V 5% DO-7 PD = .4W TC = - .023%,28480,1902-3082.

Change A6A7VR3 entry as follows:

A6A7VR3,1902-3002,3,1,DIODE-ZNR 2.37V 5% DO-7 PD = .4W TC = - .074%,28480,1902-3002.

Page 6-144, Table 6-3:

Change A11A2 entry as follows:

A11A2,85660-60030,4,1,BOARD ASSEMBLY,INTERCONNECT,YTO LOOP (MUST BE USED WITH A11A3 5086-7131),28480,85660-60030.

Add A11A2R3 entry as follows:

A11A2R3,0698-3388,2,1,RESISTOR 14.7 1% .5W F TC = 0 ± 100,28480,0698-3388.

Add A11A2VR1 entry as follows:

A11A2VR1,1902-3036,3,1,DIODE-ZNR 3.16V 5% DO-7 PD = .4W TC = - . %,28480,1902-3036.

Change A11A3 (NEW) HP Part Number and Mfr Part Number to 5086-7131; CD to 5.

Change A11A3 (RESTORED) HP Part Number and Mfr Part Number to 5086-6131; CD to 3.

Page 6-151, Table 6-3:

Change A13R9 entry as follows:

A13R9,0698-3159,5, ,RESISTOR 26.1K 1% .125W F TC = 0 ± 100,24546,C4-1/8-TO-2612-F.

Page 6-170, Table 6-3:

Change A23W4 entry as follows:

A23W4,85660-60079,1,1,CABLE ASSEMBLY COAX 7 (A21 TO A11A2) (MUST BE USED WITH A11A3 5086-7131),28480,85660-60079.

Volume 4

Section IX-RF Section Service

A6A7 YTX Current Driver

Page 9-114, Table 9-9:

Change A6A7 HP Part Number and Mfr Part Number to 85660-60006; CD to 4.

Change A6A7Q8 entry as follows:

A6A7Q8,1884-0073,2,1,THYRISTOR-SCR TO-5 VFFM = 100,28480,1884-0073.

Delete A6A7R20 and A6A7R21 entries.

Change A6A7VR1 entry as follows:

A6A7VR1,1902-3082,9,1,DIODE-ZNR 4.64V 5% DO-7 PD = .4W TC = - .023%,28480,1902-3082.

Change A6A7VR3 entry as follows:

A6A7VR3,1902-3002,3,1,DIODE-ZNR 2.37V 5% DO-7 PD = .4W TC = - .074%,28480,1902-3002.

7-15. Change 11 (RF Sections Prefixed 1827A) (Cont'd)

Page 9-118, Figure 9-40:

Replace Figure 9-40 with Figure 7-10.

Page 9-119/9-120, Figure 9-41:

Replace Figure 9-41 with Figure 7-11.

A11A2 Interconnect

Page 9-311, Table 9-46:

Change A11A2 entry as follows:

A11A2,85660-60030,4,1,BOARD ASSEMBLY, INTERCONNECT, YTO LOOP (MUST BE USED WITH A11A3 5086-7131),28480,85660-60030.

Add A11A2R3 entry as follows:

A11A2R3,0698-3388,2,1,RESISTOR 14.7 1% .5W F TC=0±100,28480,0698-3388.

Add A11A2VR1 entry as follows:

A11A2VR1,1912-3036,3,1,DIODE-ZNR 3.16V 5% DO-7 PD=.4W TC=-.064%,28480,1902-3036.

Change A11A3 (NEW) HP Part Number and Mfr Part Number to 5086-7131; CD to 5.

Change A11A3 (RESTORED) HP Part Number and Mfr Part Number to 5086-6131; CD to 3.

Page 9-312, Figure 9-118:

Replace Figure 9-118 with Figure 7-12.

Page 9-313/9-314, Figure 9-119:

Replace Figure 9-119 with Figure 7-13.

A13 HP-IB Interface

Page 9-355, Table 9-51:

Change A13R9 entry as follows:

A13R9,0698-3159,5, ,RESISTOR 26.1K 1% .125W F TC=0±100,24546,C4-1/8-TO-2612-F.

A23 Motherboard

Page 9-455, Table 9-65:

Change A23W4 entry as follows:

A23W4,85660-60079,1,1,CABLE ASSEMBLY, COAX 7 (A21 TO A11A2) (MUST BE USED WITH A11A3 5086-7131),28480,85660-60079.

7-16. CHANGE INSTRUCTIONS FOR IF-DISPLAY SECTIONS

7-17. Change 12 (IF-Display Sections Prefixed 1924A)

Volume 2

Section VI-Replaceable Parts

Page 6-34, Table 6-3:

Change A1A6 HP Part Number and Mfr Part Number to 85662-60053; CD to 3.

7-17. Change 12 (IF-Display Sections Prefixed 1924A) (Cont'd)

Page 6-35, Table 6-3:

Change A1A6R31 entry as follows:

A1A6R31,0698-3453,2,1,RESISTOR 196K 1% .125W F TC=0 ± 100,24546,C4-1/8-TO-1963-F.

Change A1A6R32 entry as follows:

A1A6R32,2100-3094,4,1,RESISTOR-TRMR 100K 10% C SIDE-ADJ 17-TRN,02111,43P104.

Change A1A6R50 entry as follows:

A1A6R50,0757-0482,7,1,RESISTOR 511K 1% .125W F TC=0 ± 100,28480,0757-0482.

Delete A1A6VR3 entry.

Volume 3

Section VIII-IF-Display Section Service

A1A6 ± 15V Regulator/A1A7 + 100V, + 5.2V Regulator

Page 8-82, Table 8-10:

Change A1A6 HP Part Number and Mfr Part Number to 85662-60053; CD to 3.

Page 8-83, Table 8-10:

Change A1A6R31 entry as follows:

A1A6R31,0698-3453,2,1,RESISTOR 196K 1% .125W F TC=0 ± 100,24546,C4-1/8-TO-1963-F.

Change A1A6R32 entry as follows:

A1A6R32,2100-3094,4,1,RESISTOR-TRMR 100K 10% C SIDE-ADJ 17-TRN,02111,43P104.

Change A1A6R50 entry as follows:

A1A6R50,0757-0482,7,1,RESISTOR 511K 1% .125W F TC=0 ± 100,28480,0757-0482.

Delete A1A6VR3 entry.

Page 8-86, Figure 8-28:

Delete VR3 from location diagram.

Page 8-87/8-88, Figure 8-29, A1A6 Schematic:

In upper left corner, change HP Part Number to 85662-60053.

In lower left corner, change serial prefix to 1924A.

In Block **E**, change value of R31 to 196K, R32 to 100K, and R50 to 511K.

Delete VR3.

7-18. Change 13 (IF-Display Sections Prefixed 1922A)

Volume 2

Section VI-Replaceable Parts

Page 6-60, Table 6-3:

Change A4A1U9 entry as follows:

A4A1U9,1810-0231,9,1,NETWORK-RES 8-PIN-SIP .1-PIN-SPCG,11236,750-81-R2.2K.

7-18. Change 13 (IF-Display Sections Prefixed 1922A) (Cont'd)

Volume 3

Section VIII-IF-Display Section Service

A4A1 Video Processor

Page 8-248, 8-33:

Change A4A1U9 entry as follows:

A4A1U9,1810-0231,9,1,NETWORK-RES 8-PIN-SIP .1-PIN-SPCG,11236,750-81-R2.2K.

Page 8-251/8-252, Figure 8-110:

In lower left corner of schematic, change serial prefix to 1922A.

In Block **C** , change value of U9 to (2.2K).

7-19. Change 14 (IF-Display Sections Prefixed 1918A)

Volume 2

Section VI-Replaceable Parts

Page 6-51, Table 6-3:

Change HP Part Numbers and Mfr Part Numbers of A3A6U4, A3A6U6, A3A6U9, and A3A6U11 as follows:

U4, 1816-1131;CD to 2.

U6, 1816-1136;CD to 7.

U9, 1816-1135; CD to 6.

U11, 1816-1132; CD to 3.

Page 6-52, Table 6-3:

Change A3A7Y1 entry as follows:

A3A7Y1,0410-1034,3,1,CRYSTAL, 16.00 MHZ,28480,0410-1034.

Volume 3

Section VIII-IF-Display Section Service

A3A6 Main Control

Page 8-198, Table 8-26:

Change HP Part Numbers and Mfr Part Numbers of A3A6U4, A3A6U6, A3A6U9, and A3A6U11 as follows:

U4, 1816-1131;CD to 2.

U6, 1816-1136;CD to 7.

U9, 1816-1135;CD to 6.

U11, 1816-1132; CD to 3.

A3A7 Interface

Page 8-206, Table 8-27:

Change A3A7Y1 entry as follows:

A3A7Y1,0410-1034,3,1,CRYSTAL, 16.00 MHZ,28480,0410-1034.

7-19. Change 14 (IF-Display Sections Prefixed 1918A) (Cont'd)

Page 8-207/8-208, Figure 8-82:

In lower left corner of schematic, change serial prefix to 1918A.

In Block **G**, change frequency of Y1 to 16.00 MHz.

7-20. Change 15 (IF-Display Sections Prefixed 1915A)

Volume 2

Section VI-Replaceable Parts

Page 6-56, Table 6-3:

Delete A3A9R45 entry.

Volume 3

Section VIII-IF-Display Section Service

A3A9 Track and Hold

Page 8-230, Table 8-30:

Delete A3A9R45 entry.

Page 8-233, Figure 8-99:

Delete R45 from location diagram.

Page 8-235/8-236, Figure 8-101:

In lower left corner of schematic, change serial prefix to 1915A.

In Block **D**, delete R45.

7-21. Change 16 (IF-Display Sections Prefixed 1906A)

Volume 2

Section VI-Replaceable Parts

Page 6-172, Table 6-3:

Change W13 HP Part Number and Mfr Part Number to 85662-60041; CD to 9.

Change W14 HP Part Number and Mfr Part Number to 85662-60040; CD to 8.

Change W15 HP Part Number and Mfr Part Number to 85662-60045; CD to 3.

7-22. Change 17 (IF-Display Sections Prefixed 1901A)

Volume 2

Section VI-Replaceable Parts

Page 6-55, Table 6-3:

Delete A3A9C40, A3A9C41, A3A9C42, and A3A9CR4 entries.

Page 6-56, Table 6-3:

Add A3A9R45 and A3A9R71 entries as follows:

A3A9R45, 0757-0401, 0, , RESISTOR 100 1% .125W F TC = 0 ± 100, 24546, C4-1/8-TO-101-F.

A3A9R71, 0698-3441, 8, , RESISTOR 215 1% .125W F TC = 0 ± 100, 24546, C4-1/8-TO-215R - F.

7-22. Change 17 (IF-Display Sections Prefixed 1901A) (Cont'd)

Page 6-57, Table 6-3:
Delete A3A9U14 entry.

Volume 3

Section VIII-IF-Display Section Service

A3A9 Track and Hold

Page 8-229, Table 8-30:
Delete A3A9C40, A3A9C41, A3A9C42, and A3A9CR4 entries.

Page 8-230, Table 8-30:
Add A3A9R45 and A3A9R71 entries as follows:
A3A9R45,0757-0401,0, ,RESISTOR 100 1% .125W F TC=0±100,24546,C4-1/8-TO-101-F.
A3A9R71,0698-3441,8, ,RESISTOR 215 1% .125W F TC=0±100,24546,C4-1/8-TO-215R-F.

Page 8-231, Table 8-30:
Delete A3A9U14 entry.

Page 8-233, Figure 8-99:
Delete C40, C41, C42, and U14 from the location diagram.
Add R45 between Q4 and Q5.
Change CR4 designator to R71.

Page 8-235/8-236, Figure 8-101:
In lower left corner of schematic, change serial prefix to 1901A.
In Block **D** , add R45 (100 ohms) in the line to the left of test point 2.
In Block **B** , replace CR4 with R71 (215 ohms).
Replace Block **A** with Figure 7-18.

7-23. Change 18 (IF-Display Sections Prefixed 1849A)

Volume 2

Section VI-Replaceable Parts

Page 6-39, Table 6-3:
Change HP Part Number and Mfr Part Number of A1A10J3 to 1251-4798; CD to 5.
Change HP Part Numbers and Mfr Part Numbers of A1A10J4, A1A10J5, and A1A10J9 to 1251-4804;
CD to 4.
Change HP Part Number and Mfr Part Number of A1A10J8 to 1251-4990; CD to 9.

Page 6-58, Table 6-3:
Change HP Part Number and Mfr Part Number of A3A10J3 to 1251-4804; CD to 4.

7-23. Change 18 (IF-Display Sections Prefixed 1849A) (Cont'd)

Volume 3

Section VIII-IF-Display Section Service

A1A10 Display Motherboard

Page 8-98, Table 8-14:

Change HP Part Number and Mfr Part Number of A1A10J3 to 1251-4798; CD to 5.

Change HP Part Numbers and Mfr Part Numbers of A1A10J4, A1A10J5, and A1A10J9 to 1251-4804; CD to 4.

Change HP Part Number and Mfr Part Number of A1A10J8 to 1251-4990; CD to 9.

A3A10 Digital Storage Motherboard

Page 8-237, Table 8-32:

Change HP Part Number and Mfr Part Number of A3A10J3 to 1251-4804; CD to 4.

7-24. Change 19 (IF-Display Sections Prefixed 1838A)

Volume 1

Section I-General Information

Page 1-11, Table 1-2:

Change **Resolution Bandwidth Switching** Uncertainty specifications in the **0°C – 55°C** range as follows:

10 Hz – 3 MHz, ± 2.0 dB

30 Hz – 1 MHz, ± 1.0 dB

7-25. Change 20 (IF-Display Sections Prefixed 1833A)

Volume 2

Section VI-Replaceable Parts

Page 6-39, Table 6-3:

Delete A1A10R1 entry.

Volume 3

Section VIII-IF-Display Section Service

A1A10 Display Motherboard

Page 8-98, Table 8-14:

Delete A1A10R1 entry.

Page 8-99, Figure 8-36:

Delete A1A10R1.

7-26. Change 21 (IF-Display Sections Prefixed 1826A)

Volume 2

Section VI-Replaceable Parts

Page 6-60, Table 6-3:

Change A4A1R58 entry as follows:

A4A1R58,0757-0394,0,1,RESISTOR 51.1 1% .125W F TC=0 ± 100,0329B,C4-1/8-TO-51R1-F.

Page 6-88, Table 6-3:

Change A4A9R53 entry as follows:

A4A9R53,0698-3162,0,1,RESISTOR 46.4K 1% .125W F TC=0 ± 100,0329B,C4-1/8-TO-4642-F.

Volume 3

Section VIII – IF-Display Section Service

A4A1 Video Processor

Page 8-248, Table 8-33:

Change A4A1R58 entry as follows:

A4A1R58,0757-0394,0,1,RESISTOR 51.1 1% .125W F TC=0 ± 100,0329B,C4-1/8-TO-51R1-F.

Page 8-251, Figure 8-110:

In Block **D**, change value of R58 to 51.1 ohms.

A4A9 IF Control

Page 8-355, Table 8-49:

Change A4A9R53 entry as follows:

A4A9R53,0698-3162,0,1,RESISTOR 46.4K 1% .125W F TC=0 ± 100,0329B,C4-1/8-TO-4642-F.

Page 8-359, Figure 8-162:

In Block **E**, change value of R53 to 46.4K.

7-27. Change 22 (IF-Display Sections Prefixed 1823A)

Volume 2

Section VI-Replaceable Parts

Page 6-18, Figure 6-8:

Change HP Part Number and Mfr Part Number of Item 33 to 85662-60092; CD to 0.

Page 6-78, Table 6-3:

Change A4A6A2C14 entry as follows:

A4A6A2C14,0160-2055,9, ,CAPACITOR-FXD .01UF +80 – 20% 100VDC CER,28480,0160-2055.

Delete A4A6A2L12 entry.

Page 6-79, Table 6-3:

Add A4A6A2R21 entry as follows:

A4A6A2R21,0757-0394,0, ,RESISTOR 51.1 1% .125W F TC=0 ± 100,0329B,C4-1/8-TO-51R1-F.

7-27. Change 22 (IF-Display Sections Prefixed 1823A) (Cont'd)

Volume 3

Section VIII-IF-Display Section Service

A4A6 Down/Up Converter

Page 8-311, Table 8-44:

Change A4A6A2C14 entry as follows:

A4A6A2C14,0160-2055,9, ,CAPACITOR-FXD .01UF +80 – 20% 100VDC CER,28480,0160-2055.

Delete A4A6A2L12 entry.

Page 8-312, Table 8-44:

Add A4A6A2R21 entry as follows:

A4A6A2R21,0757-0394,0, ,RESISTOR 51.1 1% .125W F TC=0 ± 100,0329B,C4-1/8-TO-51R1-F.

Page 8-314, Figure 8-137:

Change reference designator of L12 to R21.

Page 8-315, Figure 8-139:

In Block **B** of A4A6A2 schematic, change value of C14 to .01UF and change L12 to R21, 51.1 ohms.

7-28. Change 23 (IF-Display Sections Prefixed 1820A)

Volume 2

Section VI-Replaceable Parts

Page 6-26, Table 6-3:

Change A1A1R4 entry as follows:

A1A1R4,0757-0458,7,1,RESISTOR 51.1K 1% .125W F TC=0 ± 100,24546,C4-1/8-TO-5112-F.

Volume 3

Section VIII-IF-Display Section Service

A1A1 Keyboard/A1A2 Z Axis Amplifier

Page 8-57, Table 8-5:

Change A1A1R4 entry as follows:

A1A1R4,0757-0458,7,1,RESISTOR 51.1K 1% .125W F TC=0 ± 100,24546,C4-1/8-TO-5112-F.

Page 8-63, Figure 8-19:

Change value of A1A1R4 to 51.1K.

7-29. Change 24 (IF-Display Sections Prefixed 1811A)

NOTE

The old parts, listed in this change, are no longer available for replacement. It is necessary to order the new CRT in the event of a failure. Refer to Figure 7-14 for description of modifications necessary for compatibility between old and new parts.

7-29. Change 24 (IF-Display Sections Prefixed 1811A) (Cont'd)

Volume 2

Section VI-Replaceable Parts

Page 6-26, Table 6-3:

Change A1V1 HP Part Number and Mfr Part Number to 5083-4191; CD to 9.

Page 6-27, Table 6 – 3:

Change A1A2 HP Part Number and Mfr Part Number to 85662-60054; CD to 4.

Page 6-28, Table 6-3:

Delete A1A2TP3 entry.

Volume 3

Section VIII-IF-Display Section Service

A1A1 Keyboard/A1A2 Z Axis Amplifier

Page 8-57, Table 8-5:

Change A1V1 HP Part Number and Mfr Part Number to 5083-4191; CD to 9.

Page 8-58, Table 8-6:

Change A1A2 HP Part Number and Mfr Part Number to 85662-60054; CD to 4.

Page 8-59, Table 8-6:

Delete A1A2TP3 entry.

Page 8-62, Figure 8-18:

Replace Figure 8-18 with Figure 7-15.

Page 8-63, Figure 8-19:

In Block **D** , delete TP3.

In Block **E** , change connection of bottom side of R37 from ground to ACC line (top side of VR1).

7-30. Change 25 (IF-Display Sections Prefixed 1805A)

Volume 2

Section VI-Replaceable Parts

Page 6-4, Figure 6-1:

Change Item **1** HP Part Number and Mfr Part Number to 85662-00047; CD to 9.

Change Item **4** HP Part Number and Mfr Part Number to 85662-20027; CD to 7.

Page 6-18, Figure 6-8:

Change Item **2** HP Part Number and Mfr Part Number to 85662-20027; CD to 7.

Page 6-20, Figure 6-9:

Change Item **15** HP Part Number and Mfr Part Number to 85662-20027; CD to 7.

Page 6-23, Figure 6-10:

Change Item **10** HP Part Number and Mfr Part Number to 85662-20027; CD to 7.

7-30. Change 25 (IF-Display Sections Prefixed 1805A) (Cont'd)

Page 6-91, Table 6-3:
Delete A4A10C23 entry.

Volume 3

Section VIII-IF-Display Section Service

A4A10 IF-Video Motherboard

Page 8-361, Table 8-50:
Delete A4A10C23 entry.

Page 8-362, Figure 8-163:
Delete reference to C23 at A4XA6A2P1.

Page 8-363, Figure 8-164:
Delete C23 from between A4XA6A2P1 Pins 7 and 8.

7-31. Change 26 (IF-Display Sections Prefixed 1745A)

Volume 2

Section VI-Replaceable Parts

Page 6-59, Table 6-3:
Change A4A1C23 entry as follows:
A4A1C23,0160-2202,8,1,CAPACITOR-FXD 75PF $\pm 5\%$ 300VDC,28480,0160-2202.

Page 6-60, Table 6-3:
Change A4A1R57 entry as follows:
A4A1R57,0757-0416,7, ,RESISTOR 511 1% .125W F TC=0 ± 100 ,0329B,C4-1/8-TO-511R-F.

Page 6-71, Table 6-3:
Change A4A4R2 entry as follows:
A4A4R2,0757-0180,2,5,RESISTOR 31.6 1% .125W F TC=0 ± 100 ,28480,0757-0180.
Change A4A4R24 entry as follows:
A4A4R24,0757-0180,2, ,RESISTOR 31.6 1% .125W F TC=0 ± 100 ,28480,0757-0180.

Page 6-78, Table 6-3:
Delete A4A6A2C30 and A4A6A2L11 entries.

Volume 3

Section VIII-IF-Display Section Service

A4A1 Video Processor

Page 8-247, Table 8-33:
Change A4A1C23 entry as follows:
A4A1C23,0160-2202,8,1,CAPACITOR-FXD 75PF $\pm 5\%$ 300VDC,28480,0160-2202.

7-31. Change 26 (IF-Display Sections Prefixed 1745A) (Cont'd)

Page 8-248, Table 8-33:

Change A4A1R57 entry as follows:

A4A1R57,0757-0416,7, ,RESISTOR 511 1% .125W F TC=0±100,0329B,C4-1/8-TO-511R-F.

Page 8-251, Figure 8-110:

In Block **D** , change C23 value to 75pF and R57 value to 511.

A4A4 Bandwidth Filter

Page 8-283, Table 8-39:

Change A4A4R2 entry as follows:

A4A4R2,0757-0180,2,5,RESISTOR 31.6 1% .125W F TC=0±100,28480,0757-0180.

Change A4A4R24 entry as follows:

A4A4R24,0757-0180,2, ,RESISTOR 31.6 1% .125W F TC=0±100,28480,0757-0180.

Page 8-287, Figure 8-123:

In Block **A** , change R2 value to 31.6.

In Block **E** , change R24 value to 31.6.

A4A6 Down/Up Converter

Page 8-311, Table 8-44:

Delete A4A6A2C30 and A4A6A2L11 entries.

Page 8-314, Figures 8-136 and 8-137:

Replace Figures 8-136 and 8-137 with Figures 7-16 and 7-17.

Page 8-315, Figure 8-139:

Replace Block **D** of the A4A6A2 schematic with Figure 7-19.



7-32. Change 27 (IF-Display Sections Prefixed 1721A)

Volume 2


Section V-Adjustments

Page 5-64, Paragraph 5-24:

Change Step 29 to read:

29. Key in  –19.9 dBm. Set step attenuators to 15 dB. Press MARKER  pushbutton twice. This establishes a new reference.

Change Step 30 to read:

30. Key in  –18.9 dBm. Set step attenuators to 14 dB.

Change Step 31 to read:

31. Adjust A4A5R51 VR for MKR  level of .00 dB.

Section VI-Replaceable Parts

Pages 6-88 through 6-90:

Replace pages 6-88 through 6-90 with Table 7-2.

7-32. Change 27 (IF-Display Sections Prefixed 1721A) (Cont'd)

Volume 3

Section VIII-IF-Display Section Service

A4A9 IF Control

Pages 8-347 through 8-360:

Replace pages 8-347 through 8-360 with pages 7-49 through 7-57 except page 8-357, A4A9 IF Control, Block Diagram, which remains.

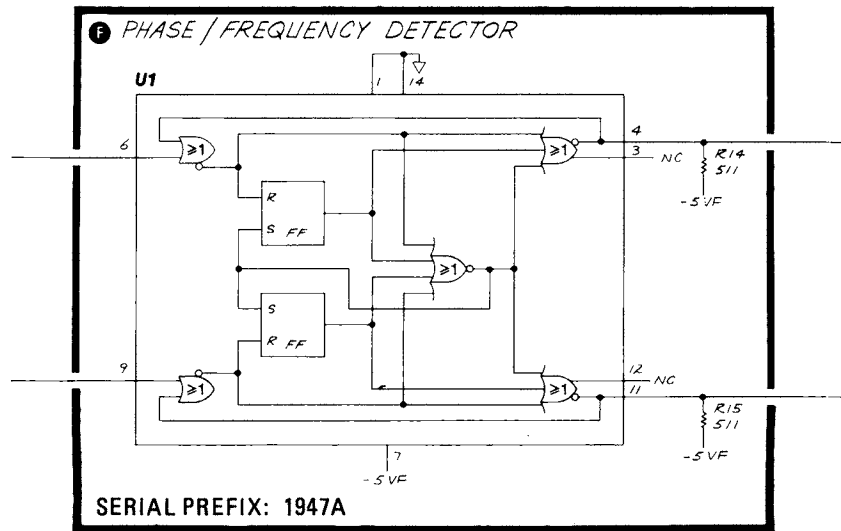


Figure 7-1. A7A3 M/N Phase Detector, Partial Schematic (CHANGE 1)

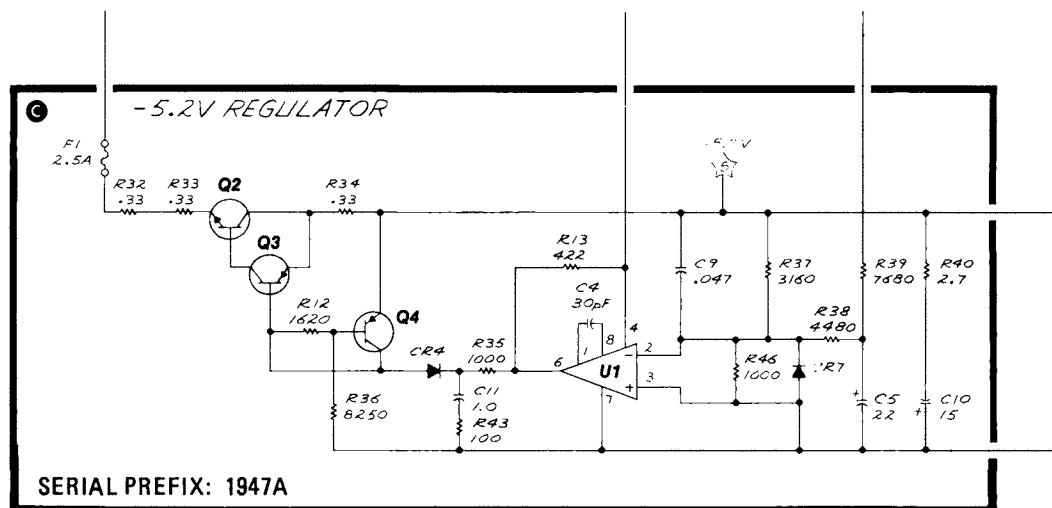


Figure 7-2. A18 Negative Regulator, Partial Schematic (CHANGE 1)

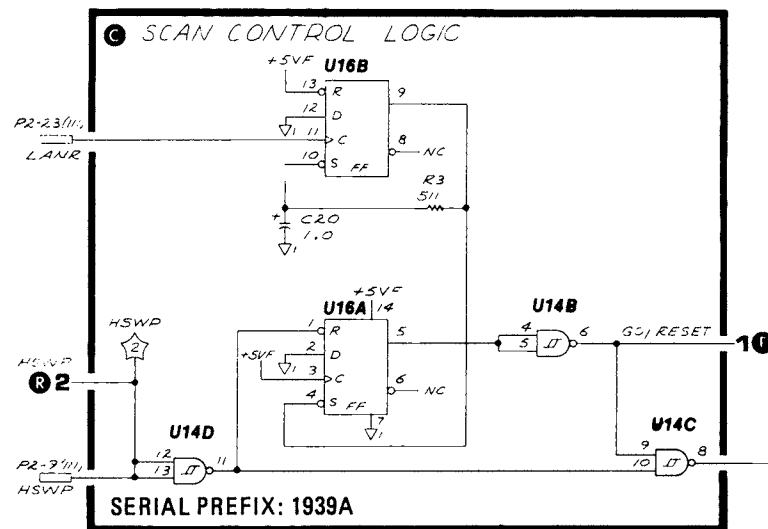


Figure 7-3. A16 Scan Generator, Partial Schematic (CHANGE 2)

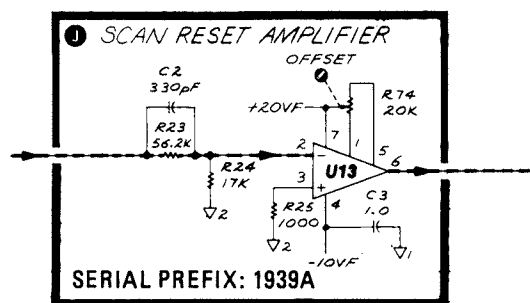


Figure 7-4. A16 Scan Generator, Partial Schematic (CHANGE 2)

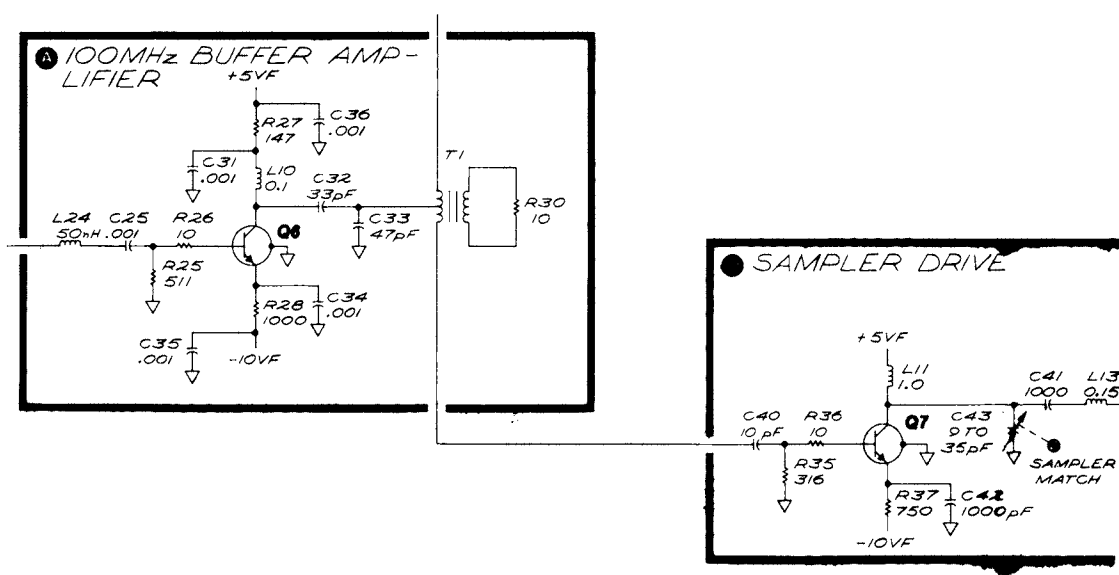


Figure 7-5. A6A9 Phase Lock, Partial Schematic (CHANGE 4)

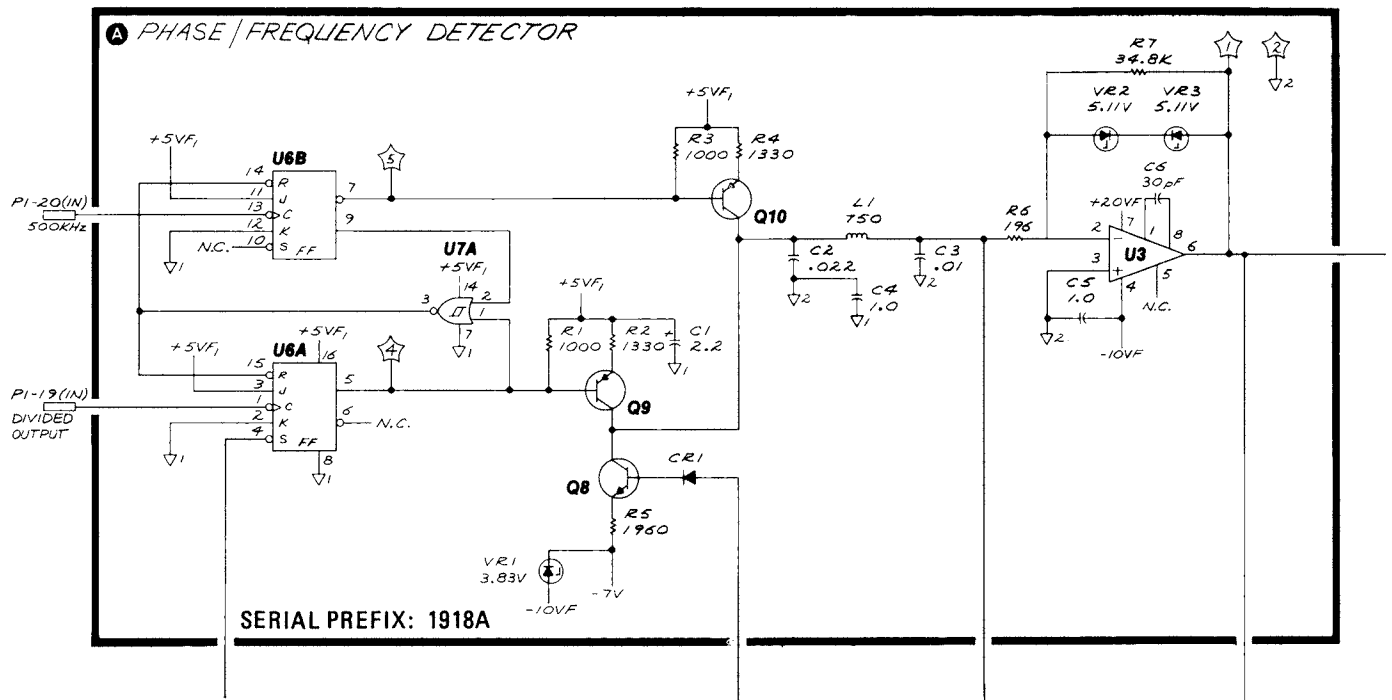


Figure 7-6. A10A6 PLL2 Phase Detector, Partial Schematic (CHANGE 6)

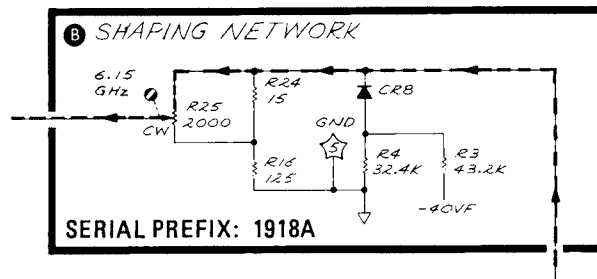


Figure 7-7. A20 Main Coil Driver, Partial Schematic (CHANGE 6)

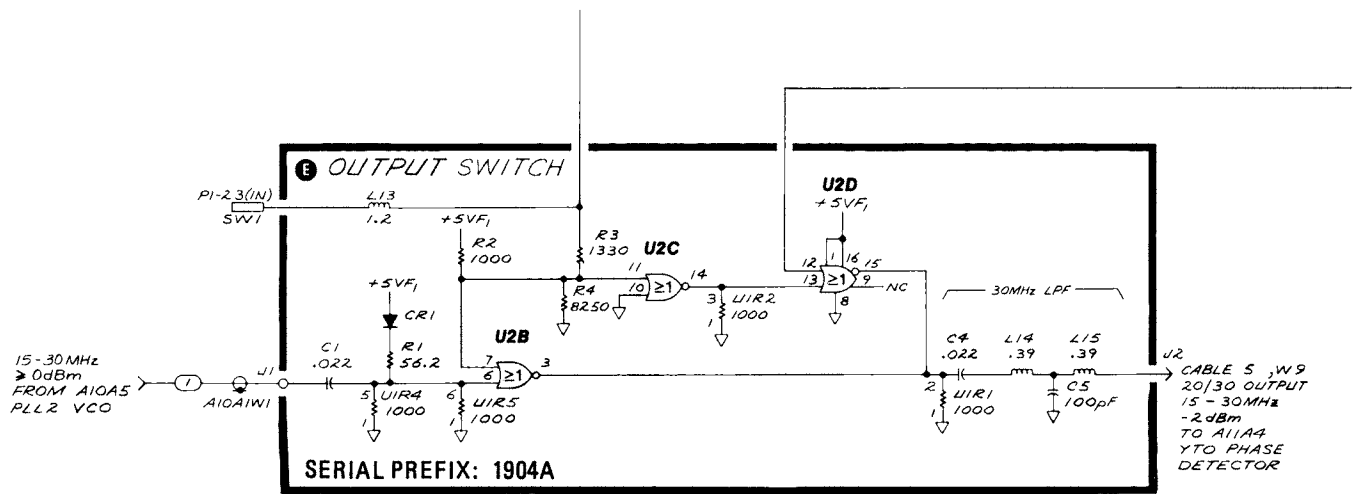


Figure 7-8. A10A1 PLL1 VCO, Partial Schematic (CHANGE 7)

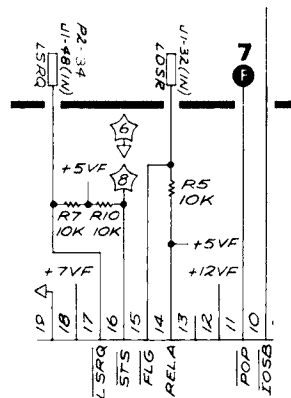


Figure 7-9. A15 Processor, Partial Schematic (CHANGE 7)

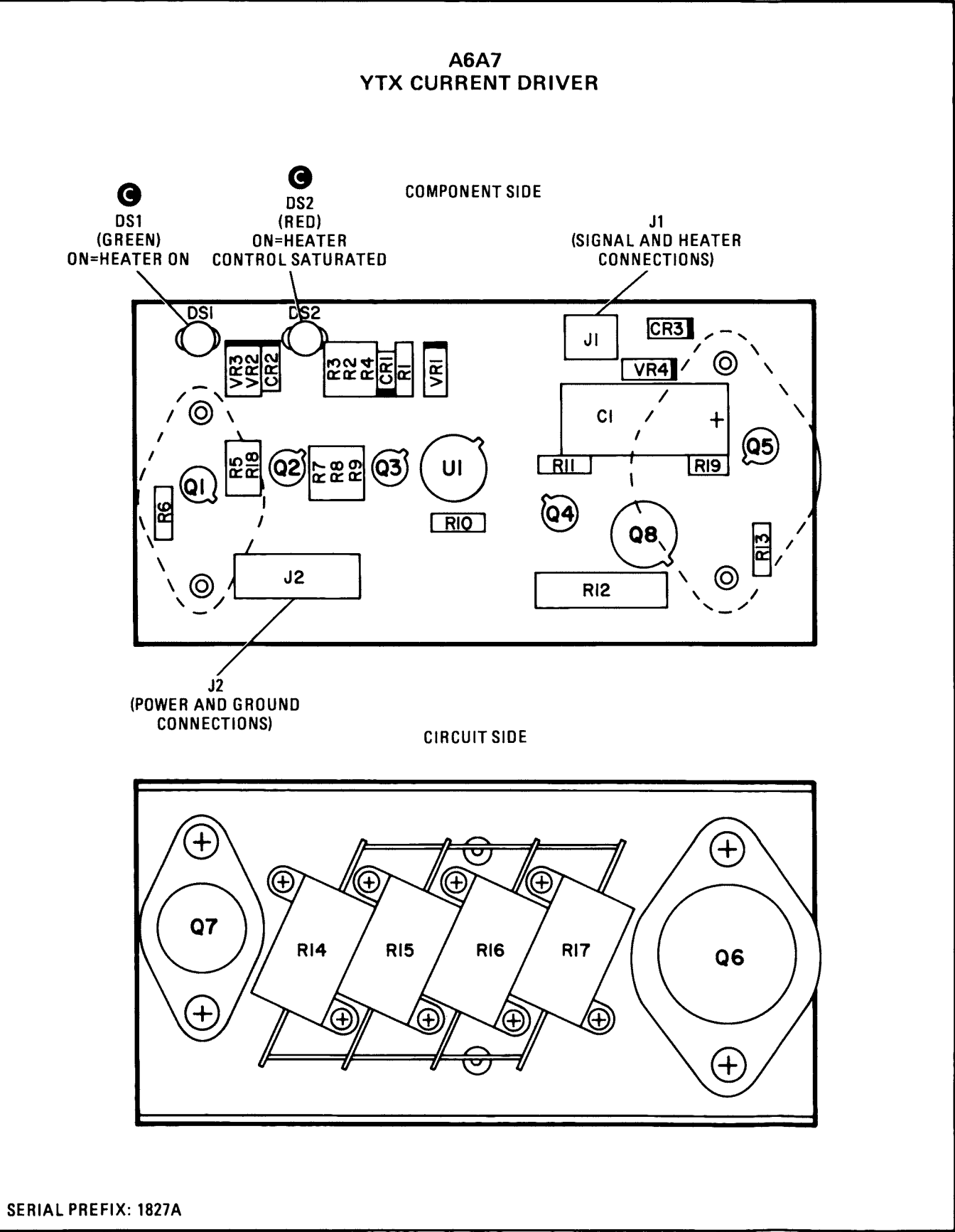


Figure 7-10. A6A7 YTX Current Driver, Component Locations (CHANGE 11)

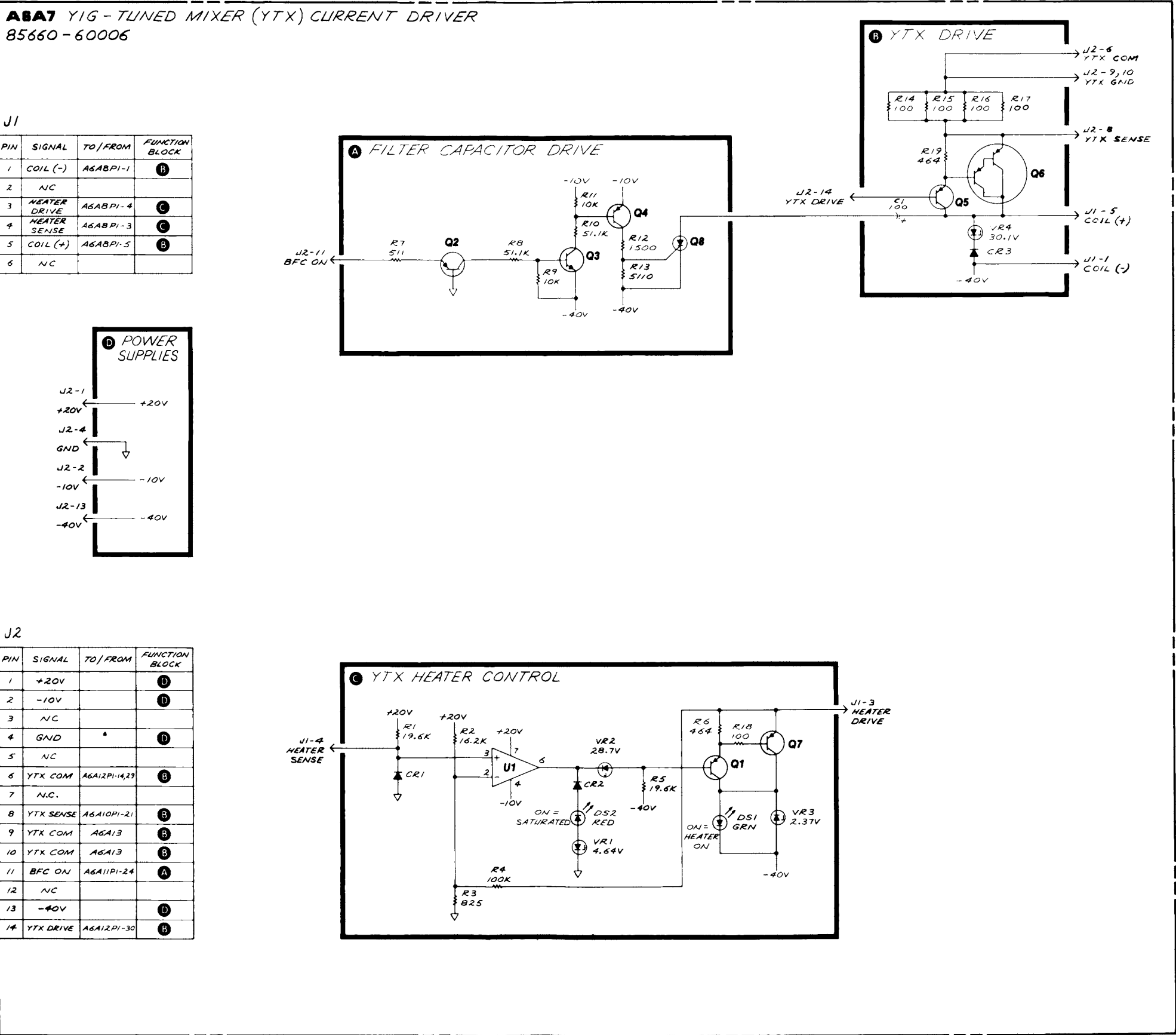
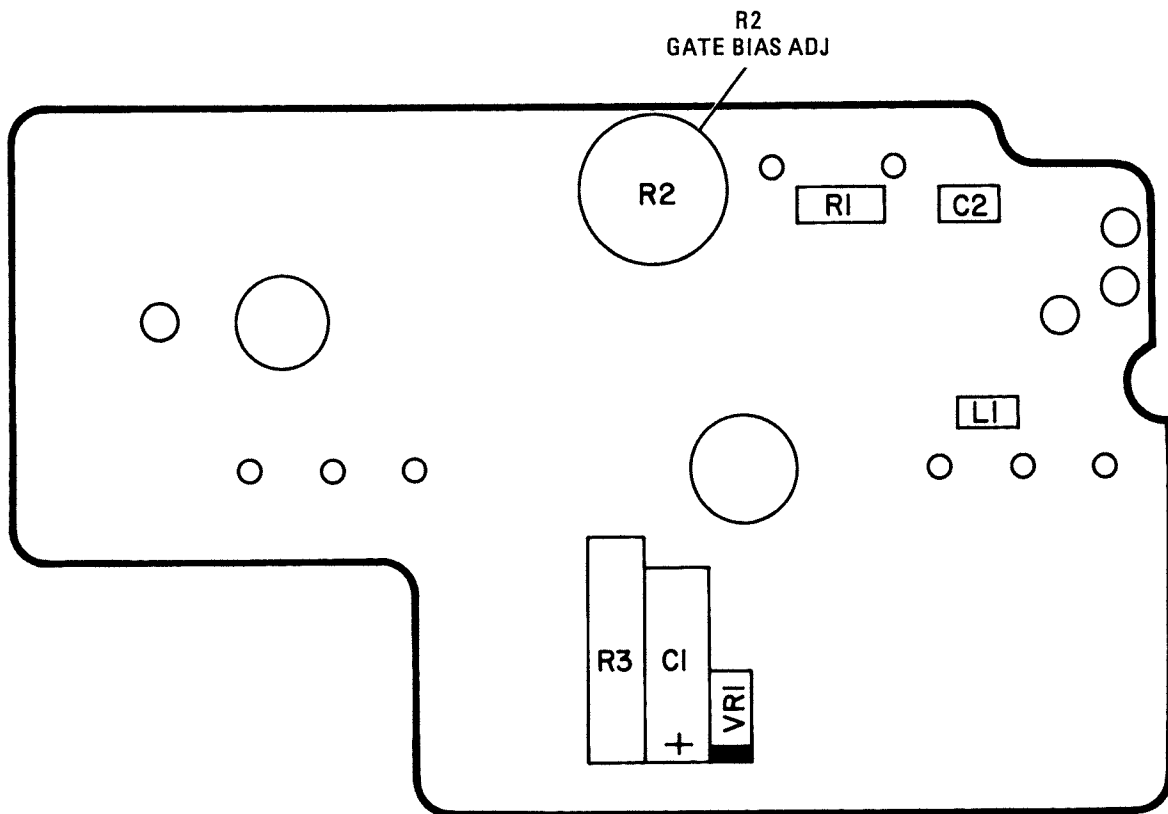


Figure 7-11. A6A7 YTX Current Driver, Schematic Diagram (CHANGE 11)

A11A2
YTO LOOP INTERCONNECT



SERIAL PREFIX: 1827A

Figure 7-12. A11A2 YTO Loop Interconnect, Component Locations (CHANGE 11)

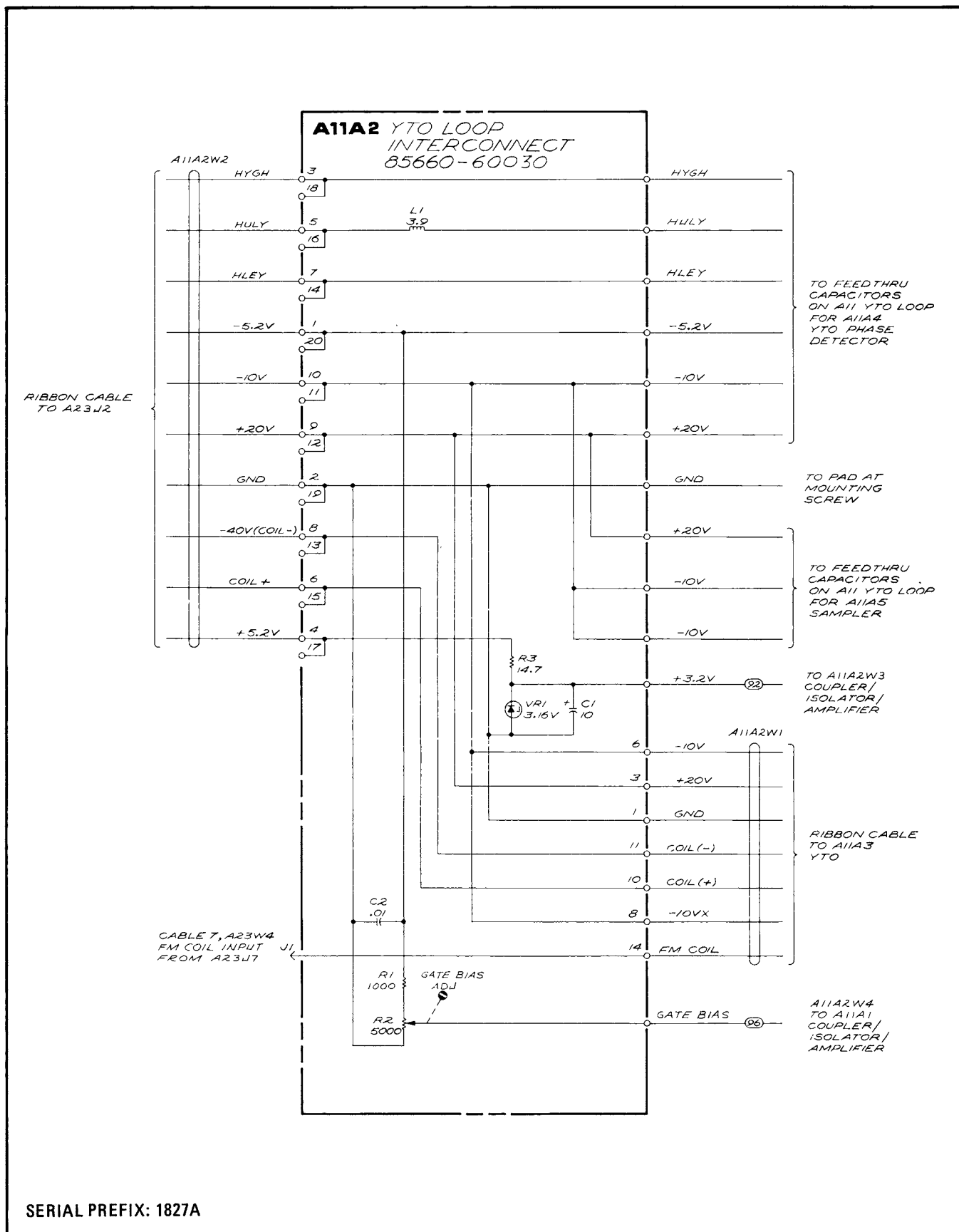
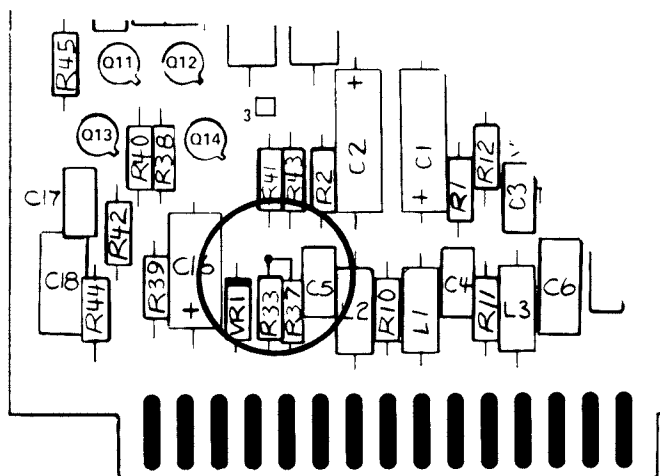


Figure 7-13. A11A2 YTO Loop Interconnect, Schematic (CHANGE 11)

**MODIFICATIONS TO A1A2 Z AXIS AMPLIFIERS (HP PART NOS.
85662-60054 and 85662-60100) FOR COMPATIBILITY WITH
CRTS (HP PART NOS. 5083-4191 and 5083-5791).**

The A1A2 Z Axis Amplifier, HP Part No. 85662-60054, and the CRT, HP Part No. 5083-4191 are compatible. The A1A2 Z Axis Amplifier, HP Part No. 85662-60100, and the CRT, HP Part No. 5083-5791, are compatible. No modifications are necessary for these combinations.

The new A1A2 Z Axis Amplifier (HP Part No. 85662-60100) is not compatible with the old A1V1 CRT (HP Part NO. 5083-4191). To make this new board compatible with the old CRT, the modification shown below is necessary. This involves unsoldering the top lead of R37 and connecting it to the top lead of R33.



The old A1A2 Z Axis Amplifier (HP Part No. 85662-60054) is not compatible with the new A1V1 CRT (HP Part No. 5083-5791). To make this old board compatible with the new CRT, the modification shown below is necessary. This involves unsoldering the top lead of R37 and connecting it to the bottom lead of VR1.

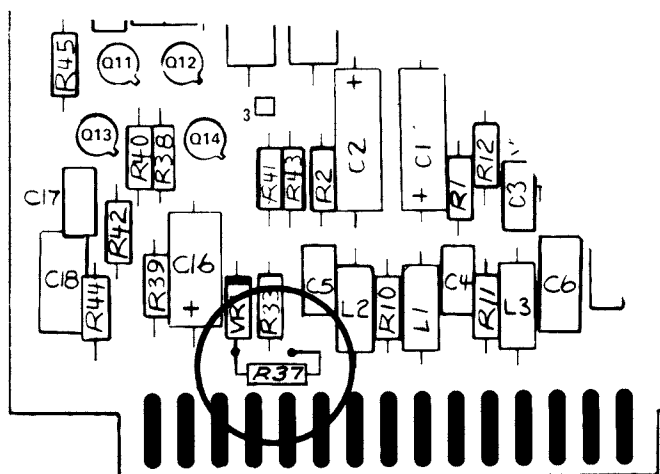


Figure 7-14. A1A2 Z Axis Amplifier Modifications for CRT Compatibility (CHANGE 24)

A1A2 Z AXIS AMPLIFIER

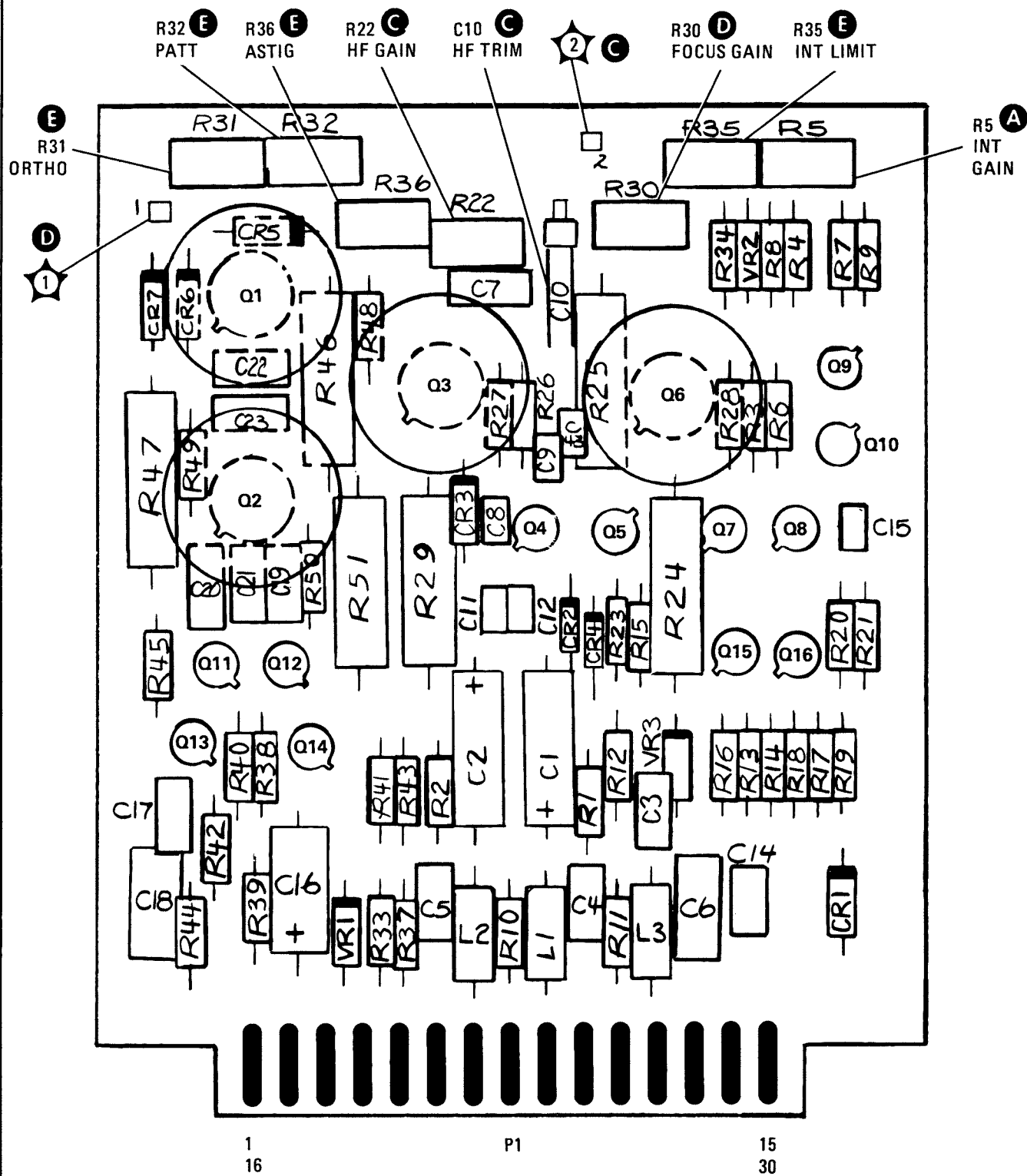
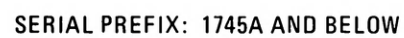
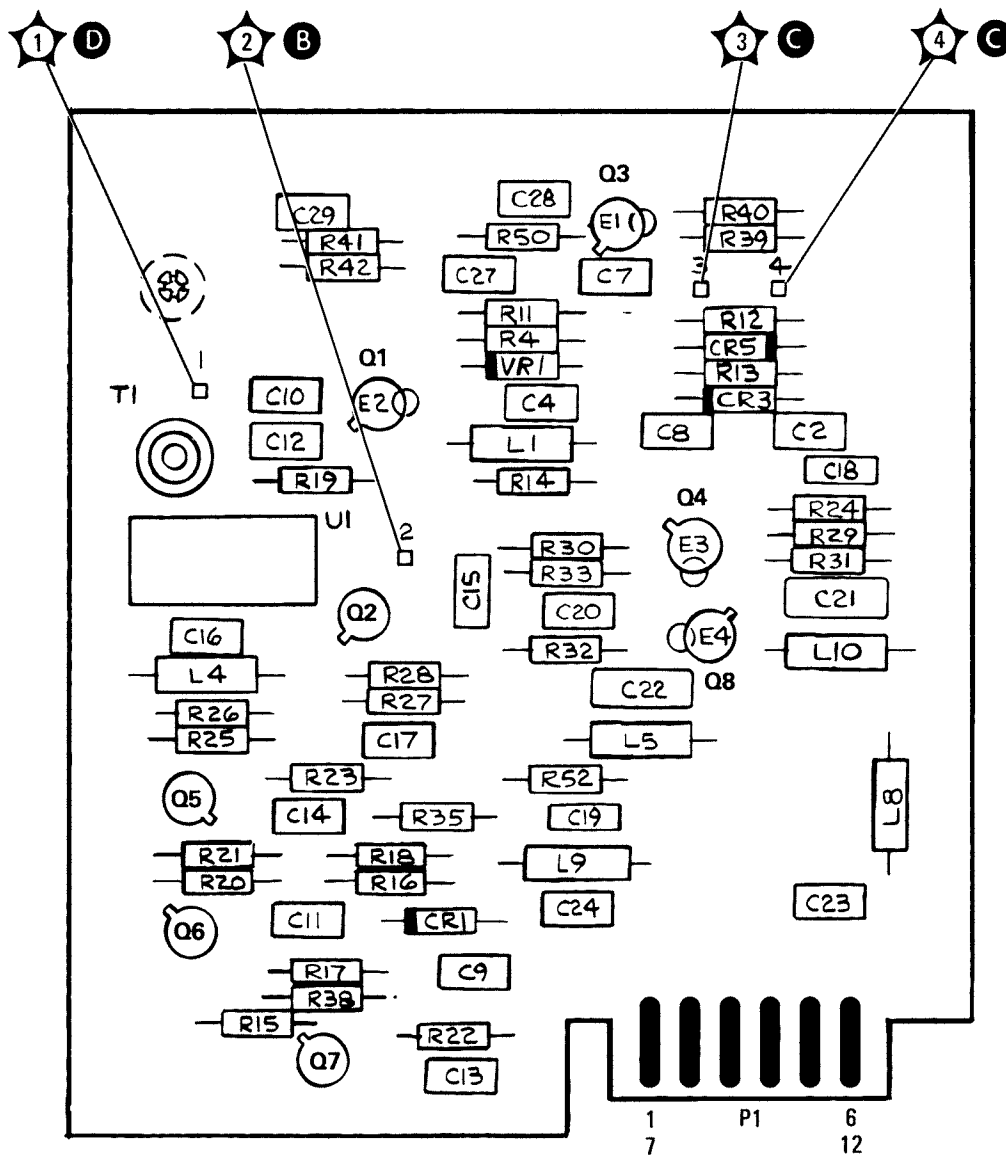


Figure 7-15. A1A2 Z Axis Amplifier, Component Locations (CHANGE 24)



7-41/7-42

A4A6A2 DOWN CONVERTER



SERIAL PREFIX: 1745A AND BELOW

Figure 7-17. A4A6A2 Down Converter, Component Locations (CHANGE 26)

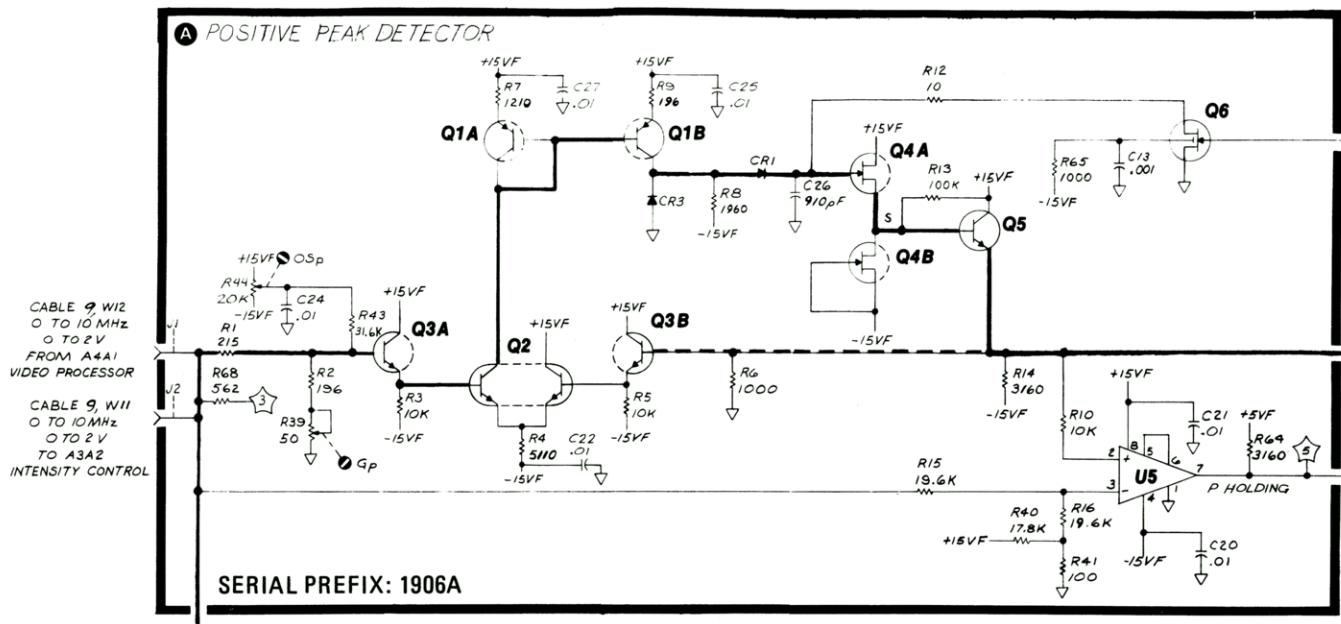


Figure 7-18. A3A9 Track and Hold, Partial Schematic (CHANGE 17)

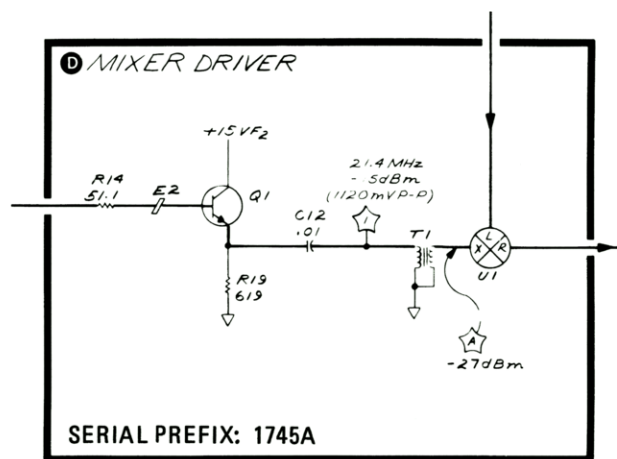


Figure 7-19. A4A6A2 Down Converter, Partial Schematic (CHANGE 26)

Table 7-2. Replaceable Parts (CHANGE 27)

Reference Designation	HP Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A9	85662-60002	1	BOARD ASSEMBLY, IF CONTROL	28480	85662-60002
A4A9C1	0180-0197	5	CAPACITOR=FXD 2,2UF+-10% 20VDC TA	0420J	150D225X9020A2
A4A9C2	0180-0197		CAPACITOR=FXD 2,2UF+-10% 20VDC TA	0420J	150D225X9020A2
A4A9C3	0180-0197		CAPACITOR=FXD 2,2UF+-10% 20VDC TA	0420J	150D225X9020A2
A4A9C4	0180-0197		CAPACITOR=FXD 2,2UF+-10% 20VDC TA	0420J	150D225X9020A2
A4A9C5	0180-0197		CAPACITOR=FXD 2,2UF+-10% 20VDC TA	0420J	150D225X9020A2
A4A9C6	0160-2055	1	CAPACITOR=FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A9CR1	1901-0040	12	DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR2	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR3			NOT ASSIGNED		
A4A9CR4			NOT ASSIGNED		
A4A9CR5			NOT ASSIGNED		
A4A9CR6	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR7	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR8			NOT ASSIGNED		
A4A9CR9			NOT ASSIGNED		
A4A9CR10			NOT ASSIGNED		
A4A9CR11	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR12	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR13	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR14	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR15	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR16	1910-0016	2	DIODE=GE 60V 60MA 1US DO-7	28480	1910-0016
A4A9CR17	1910-0016		DIODE=GE 60V 60MA 1US DO-7	28480	1910-0016
A4A9CR18	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR19	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR20	1901-0040		DIODE=SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9L1	9100-1618	1	COIL=MLD 5,6UH 10% R=45 .155DX.375LG	0217B	15-4435-1K
A4A9Q1	1854-0404	23	TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q2	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q3	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q4	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q5	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q6	1854-0404	8	TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q7	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q8	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q9	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q10	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q11	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q12	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q13	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q14	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q15	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q16	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q17	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q18	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q19	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q20	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q21	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q22	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q23	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q24	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q25	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q26	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q27	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q28	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q29	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q30	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q31	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9R1	0698-0085	17	RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R2	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R3	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R4	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R5	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R6	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R7	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R8	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R9	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R10	0698-0085		RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R11	0698-0085	9	RESISTOR 2,61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R12	0757-0442	4	RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1002-F
A4A9R13	0757-0280		RESISTOR 1K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1001-F
A4A9R14	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1002-F
A4A9R15	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1002-F

Table 7-2. Replaceable Parts (CHANGE 27)

Reference Designation	HP Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A9R16	0757-0317	1	RESISTOR 1.33K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1331-F
A4A9R17	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1002-F
A4A9R18	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1002-F
A4A9R19	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1002-F
A4A9R20	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1002-F
A4A9R21	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1002-F
A4A9R22	0698-3260	4	RESISTOR 464K 1% .125W F TC=0+-100	0160G	CC
A4A9R23	0698-3454	2	RESISTOR 215K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2153-F
A4A9R24	0698-3160	1	RESISTOR 316K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=3162-F
A4A9R25	0698-3454		RESISTOR 215K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2153-F
A4A9R26	0757-0464	1	RESISTOR 90.9K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=9092-F
A4A9R27	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1002-F
A4A9R28	0757-0458	1	RESISTOR 51.1K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5112-F
A4A9R29	0757-0420	1	RESISTOR 750 1% .125W F TC=0+-100	0329B	C4-1/8-T0=751-F
A4A9R30	0757-0438	12	RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R31	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R32	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R33	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R34	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R35	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R36	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R37	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2611-F
A4A9R38	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2611-F
A4A9R39	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2611-F
A4A9R40	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R41	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R42	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R43	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2611-F
A4A9R44	0757-0428	1	RESISTOR 1.62K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1621-F
A4A9R45	0757-0280		RESISTOR 1K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1001-F
A4A9R46	0757-0419	2	RESISTOR 681 1% .125W F TC=0+-100	0329B	C4-1/8-T0=681R-F
A4A9R47	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R48	0757-0280		RESISTOR 1K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1001-F
A4A9R49	0698-3260		RESISTOR 464K 1% .125W F TC=0+-100	0160G	CC
A4A9R50	0698-3260		RESISTOR 464K 1% .125W F TC=0+-100	0160G	CC
A4A9R51	0757-0416	2	RESISTOR 511 1% .125W F TC=0+-100	0329B	C4-1/8-T0=511R-F
A4A9R52	0757-0416		RESISTOR 511 1% .125W F TC=0+-100	0329B	C4-1/8-T0=511R-F
A4A9R53	0757-0279	3	RESISTOR 3.16K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=3161-F
A4A9R54	0698-3260		RESISTOR 464K 1% .125W F TC=0+-100	0160G	CC
A4A9R55	0698-3444	1	RESISTOR 316 1% .125W F TC=0+-100	0329B	C4-1/8-T0=316R-F
A4A9R56	0757-0279		RESISTOR 3.16K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=3161-F
A4A9R57	0757-0280		RESISTOR 1K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1001-F
A4A9R58	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2611-F
A4A9R59	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=2611-F
A4A9R60	2100-3109	1	RESISTOR-TRMR 2K 10% C SIDE-ADJ 17-TRN	7313B	89PR2K
A4A9R61	2100-3103	1	RESISTOR-TRMR 10K 10% C SIDE-ADJ 17-TRN	7313B	89PR10K
A4A9R62	2100-3054	1	RESISTOR-TRMR 50K 10% C SIDE-ADJ 17-TRN	7313B	89PR50K
A4A9R63	0757-0419		RESISTOR 681 1% .125W F TC=0+-100	0329B	C4-1/8-T0=681R-F
A4A9R64	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=5111-F
A4A9R65	2100-3094	1	RESISTOR-TRMR 100K 10% C SIDE-ADJ 17-TRN	7313B	89PR100K
A4A9R66	2100-3161	1	RESISTOR-TRMR 20K 10% C SIDE-ADJ 17-TRN	7313B	89PR20K
A4A9R67	0757-0465	1	RESISTOR 100K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=1003-F
A4A9R68	0757-0279		RESISTOR 3.16K 1% .125W F TC=0+-100	0329B	C4-1/8-T0=3161-F
A4A9TP1	1251-0600	2	TEST POINT	28480	1251-0600
A4A9TP2	1251-0600		TEST POINT	28480	1251-0600
A4A9U1	1826-0092	1	IC OP AMP	28480	1826-0092
A4A9U2	1820-1418	2	IC DCDR TTL L8 BCD-T0-DEC 4-T0-10-LINE	0169H	8N74LS42N
A4A9U3	1820-1195	1	IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74LS175A
A4A9U4	1820-1418		IC DCDR TTL L8 BCD-T0-DEC 4-T0-10-LINE	0169H	8N74LS42N
A4A9U5	1820-1199	1	IC INV TTL L8 HEX 1-INP	0169H	8N74LS04N
A4A9U6	1820-1196	5	IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74LS174N
A4A9U7	1820-1216	1	IC DCDR TTL L8 3-T0-8-LINE 3-INP	0379D	8N74LS138N
A4A9U8	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74LS174N
A4A9U9	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74LS174N
A4A9U10	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74LS174N
A4A9U11	1820-1208	1	IC GATE TTL L8 OR QUAD 2-INP	0291J	74LS32A
A4A9U12	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74LS174N
A4A9U13	1820-1200	1	IC INV TTL L8 HEX 1-INP	0169H	8N74LS05N
A4A9VR1	1902-0041	1	DIODE-ZNR 5.11V 5% DO-7 PDS=.4W TC=-.009%	02036	82 10039-98
A4A9VR2	1902-3203	1	DIODE-ZNR 14.7V 5% PD=.4W	02236	FZ7206

A4A9 IF CONTROL, CIRCUIT DESCRIPTION (CHANGE 27)

Control information for A4 IF-Video assembly is transmitted over the Instrument Bus from the A15 Processor and decoded by A4A9 IF Control.

Address Decoder B

The Address Decoder monitors ADR 0 - 4 and activates the input latches for addresses 20 and 21 when LTIO goes low. Address 20 activates U6, U8, and U9. Address 21 activates U3, U10, and U12:

	ADR 4 (16)	ADR 3 (8)	ADR 2 (4)	ADR 1 (2)	ADR 0 (1)
Address 20	H	L	H	L	L
Address 21	H	L	H	L	H

Input Latches A

The input latches hold whatever was present at their inputs when LTIO goes low. The output goes high to activate the function. For example, when U8 pin 5 is high, SG10 (step gain 10) is activated.

A0.0 to A15.9 dB Control C

Fourteen dB (A8dB, A4dB, and A2dB) of attenuation is accomplished by switching in discrete steps of attenuation in A4A5 Step Gain. The smaller steps (0.1 dB through 1.9 dB) are accomplished by sinking discrete amounts of current through a PIN diode attenuator in A4A5. The output of U13 goes low when a particular step of attenuation is required. The fixed resistors tied to edge-connector pin P2-7 determine the amount of current sunk (and hence the attenuation) of the PIN diode attenuator. The operation of the attenuator is described in A4A5.

IF Gain Control D

The IF Gain Control interfaces with A4A5 Step Gain, the Log Amplifiers in A4A2 and A4A3, and A4A1 Video Processor. A table on the A4A9 schematic describes the conditions under which the steps are used.

Bandwidth Control E

Bandwidths from 3 MHz to 100 kHz (BW5 ≥ + 14.8V). These bandwidths are produced in the 21.4 MHz IF by four parallel tank circuits (two in A4A4 Bandwidth Filter and two on A4A8 Attenuator—Bandwidth Filter). Their Q (which determines bandwidth) is controlled by PIN diodes used as variable resistors. The resistance of these PIN diodes is determined by the average current through them, which is generated by Q11. Either R60, R61, or R62 is switched in by U2, depending on which bandwidth had been

selected. These potentiometers (3 MHz, 1 MHz, and 300 kHz) determine the amount of current sunk by Q11, which in turn determines the bandwidth. If no current is sunk by Q11, the filters go to their highest Q (determined by factory-selected resistors), which yields the 100 kHz bandwidth.

Bandwidths from 30 kHz to 3 kHz (BW5= -0.6V). These bandwidths are produced in the 21.4 MHz IF by five crystal filters (two in A4A8 and three in A4A4). Their Q (which determines bandwidth) is controlled by PIN diodes, the same as for the wider bandwidths. (Refer to the preceding discussion of the wider bandwidths.) Q12 is the current sink for bandwidths from 30 kHz to 3 kHz. The amount of current it sinks is selected by U2 and adjusted by potentiometers R65 and R66 (10 kHz and 3 kHz), depending on which bandwidth is selected. If no current is sunk by Q12, the filters go to their lowest Q (determined by factory-selected resistors), which yields the 30 kHz bandwidth. Q2 should be off except for the 3 MHz to 100 kHz bandwidths.

Bandwidths from 1 kHz to 10 Hz (SWITCH = 0V). These bandwidths are produced in the 3 MHz IF (A4A7) by five crystal filters. The Q of these filters is controlled by resistors which are switched in by diodes. These, in turn, are controlled by Q27, Q28, Q30, and Q31. The transistors switch lines which are named after the bandwidths they produce. Q29 is on (saturated) only for bandwidths 1 kHz through 10 Hz.

A4A9 IF CONTROL, TROUBLESHOOTING (CHANGE 27)

If the BW5 control line is not switching, A7 is probably defective. If Q7 is found to be defective, check Q8 to determine if it has failed also.

Figure 7-17 below is reproduced from the troubleshooting hints for the A4A5 Step Gain board. It shows the results of an easy test of the operation of the 0.0 to 1.9 dB attenuator section of the A0.0 to A15.9 dB control. From the figure, it can be noted that the 0.1 dB steps seem to be more accurate from -11 dBm to -12 dBm than from -10 dBm to -11 dBm. The truth table in Note 10 indicates that only the A1 dB control line is different in these ranges. When R24 is switched in, the impedance level of the circuit changes. Consequently the step size is affected. As long as the steps are discrete and monotonic during the test, the circuit is working properly.

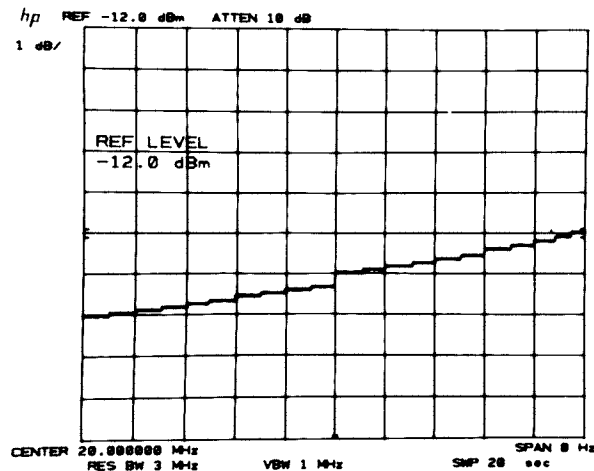


Figure 7-20. 0.1 dB Step Gain Display

If every other step was inaccurate during the 1 dB step test of the A0.0 — A15.9 dB Attenuator on the A4A5 Step Gain board, then R24 is an improper value. Refer to Section V for the procedure to determine the correct value.

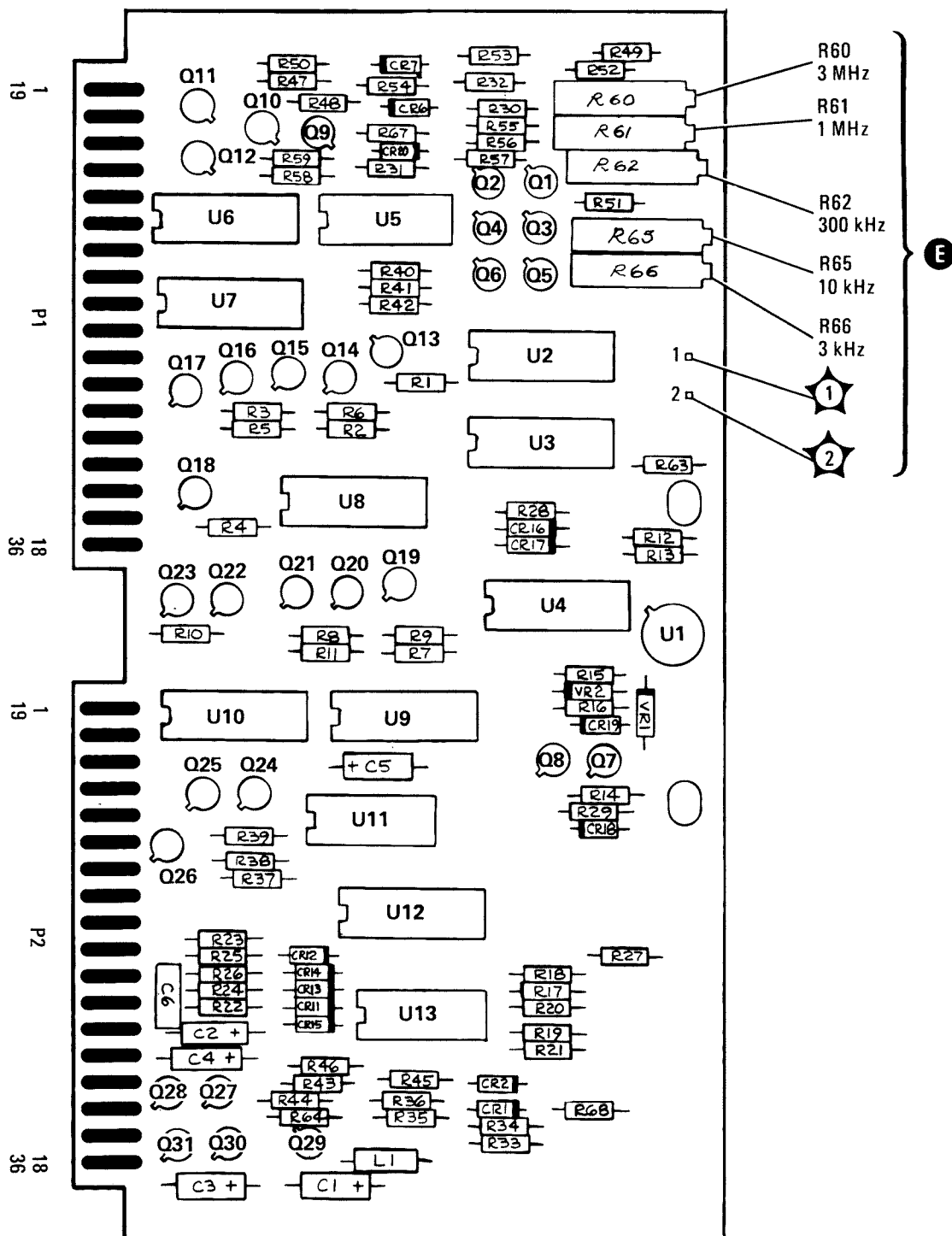
Table 7-3. Replaceable Parts (CHANGE 27)

Reference Designation	HP Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A9	85662-60002	1	BOARD ASSEMBLY, IF CONTROL	28480	85662-60002
A4A9C1	0180-0197	5	CAPACITOR-FXD 2,2UF+-10% 20VDC TA	0420J	150225X9020A2
A4A9C2	0180-0197		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	0420J	150225X9020A2
A4A9C3	0180-0197		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	0420J	150225X9020A2
A4A9C4	0180-0197		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	0420J	150225X9020A2
A4A9C5	0180-0197		CAPACITOR-FXD 2,2UF+-10% 20VDC TA	0420J	150225X9020A2
A4A9C6	0160-2055	1	CAPACITOR-FXD .01UF +80-20% 100VDC CER	28480	0160-2055
A4A9CR1	1901-0040	12	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR2	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR3			NOT ASSIGNED		
A4A9CR4			NOT ASSIGNED		
A4A9CR5			NOT ASSIGNED		
A4A9CR6	1901-0040	12	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR7	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR8			NOT ASSIGNED		
A4A9CR9			NOT ASSIGNED		
A4A9CR10			NOT ASSIGNED		
A4A9CR11	1901-0040	2	DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR12	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR13	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR14	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR15	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR16	1910-0016	2	DIODE-GE 60V 60MA 1US DO-7	28480	1910-0016
A4A9CR17	1910-0016		DIODE-GE 60V 60MA 1US DO-7	28480	1910-0016
A4A9CR18	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR19	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9CR20	1901-0040		DIODE-SWITCHING 30V 50MA 2NS DO-35	28480	1901-0040
A4A9L1	9100-1618	1	COIL-MLD 5.6UH 10% Q=45 .155DX.375LG	0217B	15-4435-1X
A4A9Q1	1854-0404	23	TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q2	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q3	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q4	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q5	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q6	1854-0404	8	TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q7	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q8	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q9	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q10	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q11	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q12	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q13	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q14	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q15	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q16	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q17	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q18	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q19	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q20	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q21	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q22	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q23	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q24	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q25	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q26	1854-0404		TRANSISTOR NPN 8I TO-18 PD=360MW	28480	1854-0404
A4A9Q27	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q28	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q29	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q30	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9Q31	1853-0281		TRANSISTOR PNP 2N2907A 8I TO-18 PD=400MW	0203G	2N2907A
A4A9R1	0698-0085	17	RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R2	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R3	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R4	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R5	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R6	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R7	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R8	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R9	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R10	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R11	0698-0085	9	RESISTOR 2.61K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-2611-F
A4A9R12	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1002-F
A4A9R13	0757-0280		RESISTOR 1K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1001-F
A4A9R14	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1002-F
A4A9R15	0757-0442		RESISTOR 10K 1% .125W F TC=0+-100	0329B	C4-1/8-T0-1002-F

Table 7-3. Replaceable Parts (CHANGE 27)

Reference Designation	HP Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A9R16	0757-0317	1	RESISTOR 1.33K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1331-F
A4A9R17	0757-0442		RESISTOR 10K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1002-F
A4A9R18	0757-0442		RESISTOR 10K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1002-F
A4A9R19	0757-0442		RESISTOR 10K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1002-F
A4A9R20	0757-0442		RESISTOR 10K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1002-F
A4A9R21	0757-0442		RESISTOR 10K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1002-F
A4A9R22	0698-3260	4	RESISTOR 464K 1% .125W F TC=0+/-100	01600	CC
A4A9R23	0698-3454	2	RESISTOR 215K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2153-F
A4A9R24	0698-3160	1	RESISTOR 31.6K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=3162-F
A4A9R25	0698-3454	1	RESISTOR 215K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2153-F
A4A9R26	0757-0464	1	RESISTOR 90.9K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=9092-F
A4A9R27	0757-0442		RESISTOR 10K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1002-F
A4A9R28	0757-0458	1	RESISTOR 51.1K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5112-F
A4A9R29	0757-0420	1	RESISTOR 750 1% .125W F TC=0+/-100	03298	C4-1/8-T0=751-F
A4A9R30	0757-0438	12	RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R31	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R32	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R33	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R34	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R35	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R36	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R37	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2611-F
A4A9R38	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2611-F
A4A9R39	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2611-F
A4A9R40	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R41	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R42	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R43	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2611-F
A4A9R44	0757-0428	1	RESISTOR 1.62K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1621-F
A4A9R45	0757-0280		RESISTOR 1K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1001-F
A4A9R46	0757-0419	2	RESISTOR 681 1% .125W F TC=0+/-100	03298	C4-1/8-T0=681R-F
A4A9R47	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R48	0757-0280		RESISTOR 1K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1001-F
A4A9R49	0698-3260		RESISTOR 464K 1% .125W F TC=0+/-100	01600	CC
A4A9R50	0698-3260		RESISTOR 464K 1% .125W F TC=0+/-100	01600	CC
A4A9R51	0757-0416	2	RESISTOR 511 1% .125W F TC=0+/-100	03298	C4-1/8-T0=511R-F
A4A9R52	0757-0416		RESISTOR 511 1% .125W F TC=0+/-100	03298	C4-1/8-T0=511R-F
A4A9R53	0757-0279	3	RESISTOR 3.16K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=3161-F
A4A9R54	0698-3260		RESISTOR 464K 1% .125W F TC=0+/-100	01600	CC
A4A9R55	0698-3444	1	RESISTOR 316 1% .125W F TC=0+/-100	03298	C4-1/8-T0=316R-F
A4A9R56	0757-0279		RESISTOR 3.16K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=3161-F
A4A9R57	0757-0280		RESISTOR 1K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1001-F
A4A9R58	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2611-F
A4A9R59	0698-0085		RESISTOR 2.61K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=2611-F
A4A9R60	2100-3109	1	RESISTOR-TRMR 2K 10% C SIDE=ADJ 17-TRN	73138	89PR2K
A4A9R61	2100-3103	1	RESISTOR-TRMR 10K 10% C SIDE=ADJ 17-TRN	73138	89PR10K
A4A9R62	2100-3054	1	RESISTOR-TRMR 50K 10% C SIDE=ADJ 17-TRN	73138	89PR50K
A4A9R63	0757-0419		RESISTOR 681 1% .125W F TC=0+/-100	03298	C4-1/8-T0=681R-F
A4A9R64	0757-0438		RESISTOR 5.11K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=5111-F
A4A9R65	2100-3094	1	RESISTOR-TRMR 100K 10% C SIDE=ADJ 17-TRN	73138	89PR100K
A4A9R66	2100-3161	1	RESISTOR-TRMR 20K 10% C SIDE=ADJ 17-TRN	73138	89PR20K
A4A9R67	0757-0465	1	RESISTOR 100K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=1003-F
A4A9R68	0757-0279		RESISTOR 3.16K 1% .125W F TC=0+/-100	03298	C4-1/8-T0=3161-F
A4A9TP1	1251-0600	2	TEST POINT	28480	1251-0600
A4A9TP2	1251-0600		TEST POINT	28480	1251-0600
A4A9U1	1826-0092	1	IC OP AMP	28480	1826-0092
A4A9U2	1820-1418	2	IC DCDR TTL L8 BCD-T0-DEC 4-T0=10-LINE	0169H	8N74L842N
A4A9U3	1820-1195	1	IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74L8175A
A4A9U4	1820-1418		IC DCDR TTL L8 BCD-T0-DEC 4-T0=10-LINE	0169H	8N74L842N
A4A9U5	1820-1199	1	IC INV TTL L8 HEX 1-INP	0169H	8N74L804N
A4A9U6	1820-1196	5	IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74L8174N
A4A9U7	1820-1216	1	IC DCDR TTL L8 3-T0=8-LINE 3-INP	0379D	8N74L8138N
A4A9U8	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74L8174N
A4A9U9	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74L8174N
A4A9U10	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74L8174N
A4A9U11	1820-1208	1	IC GATE TTL L8 OR QUAD 2-INP	0291J	74L832A
A4A9U12	1820-1196		IC FF TTL L8 D-TYPE POS-EDGE-TRIG COM	0379D	AM74L8174N
A4A9U13	1820-1200	1	IC INV TTL L8 HEX 1-INP	0169H	8N74L805N
A4A9VR1	1902-0041	1	DIODE-ZNR 5.11V 5% DO-7 PD=.4W TC=-.009%	02036	82 10939-98
A4A9VR2	1902-3203	1	DIODE-ZNR 14.7V 5% PD=.4W	02236	FZ7206

A4A9 IF CONTROL



SERIAL PREFIX: 1721A

Figure 7-21. A4A9 IF Control, Component Locations (CHANGE 27)

A4A9
IF CONTROL

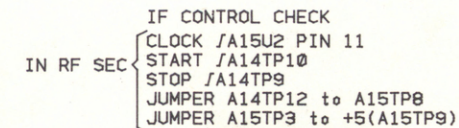


Figure 7-22. A4A9 IF Control, Signature Analysis Troubleshooting Diagram (CHANGE 27)

A4A9 IF CONTROL
85662-60002

Pin	Signal	To/From	Function Block
1	REC CL	AA4, P2.2	A
19	B LOG	AA4, P1.12	A
2	REC ZERO	AA4, P2.1	A
20	A LOG	AA4, P1.1	A
3	CRT DBCL	A1A6, P1.7, 25	A
21	BWBS	AA4, P1.10	B
4	BW1	AA4, P1.10	B
22	LTIO	AA4, P1.49	B
5	BW3	AA4, P1.11	B
23	ADR#	AA4, P1.23	B
6	A10A8	AA4, P1.7	B
24	ADR2	AA4, P1.25	B
7	A20A8	AA4, P1.8	B
25	ADR4	AA4, P1.27	B
8	SG2-2	AA4, P1.26	B
26	ADR3	AA4, P1.26	B
9	SG20-1	AA4, P1.9	B
27	ADR1	AA4, P1.24	B
10	SG10	AA4, P1.6	B
28	IOB2	AA4, P1.15	B
11	SWTCH	AA46	B
29	IOB4	AA4, P1.17	B
12	BW5	AA4, A3, A4	B
30	IOB5	AA4, P1.18	B
13	LOG/LIN	AA4, A3	B
31	IOB3	AA4, P1.16	B
14	OS10	AA4, P1.8	D
32	BW0	AA4, P1.2	D
15	OS20-1	AA4, P1.2	D
33	BW6	AA4, P1.3	D
16	OS30-2	AA4, P1.10	D
34	BW8	AA4, P1.4	D
17	GND		G
35	BW9A	AA4, P1.5	G
18	LG20	AA4, P2.7	D
36	LG10	AA4, P2.7	D

P2			
PIN	SIGNAL	TO/FROM	FUNCTION BLOCK
19	I0B1	AA4, I0, J1-14	A
19	I0B6	AA4, I0, J1-9	A
20	I0B9	AA4, I0, J1-12	A
20	I0B8	AA4, I0, J1-11	A
21	I0B7	AA4, I0, J1-10	A
21	I0B1W	AA4, I0, J1-13	A
22	A4A8	AA45, P2, 15	C
22	A2A8	AA45, P2, 16	C
23	A4B8	AA45, P2, 15	C
23	GND		C
24	GND		C
24	GND		C
6	A4B8	AA45, P2, 13	C
8	I0B5	AA4, I0, J1-8	A
8	GND		C
26	I0B3	AA4, I0, J1-6	A
9	GND		C
27	I0B1	AA4, I0, J1-4	A
10	GND		C
28	I0B8	AA4, I0, J1-3	A
11	GND		C
29	I0B2	AA4, I0, J1-5	A
12	30 Hz	AA47, P2, 1	E
30	I0B4	AA47, I0, J1-7	A
13	10 Hz	AA47, P2, 2	E
31	GND		C
14	300 Hz	AA47, P2, 7	E
32	GND		C
15	100 Hz	AA47, P2, 8	E
33	GND		C
16	+5V		C
34	+5V		C
17	-15V		C
35	-15V		C
18	+15V		C
36	+15V		C

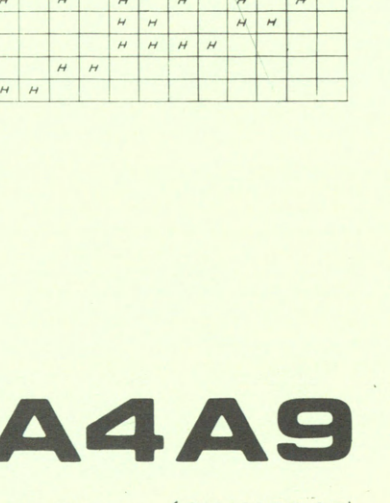
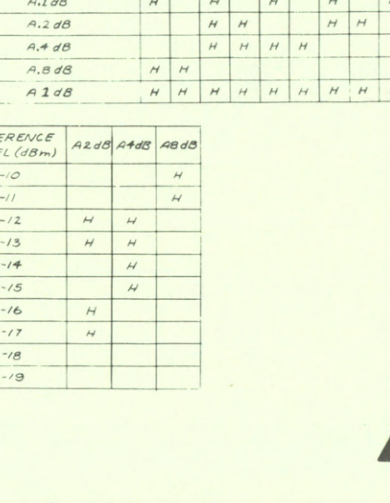
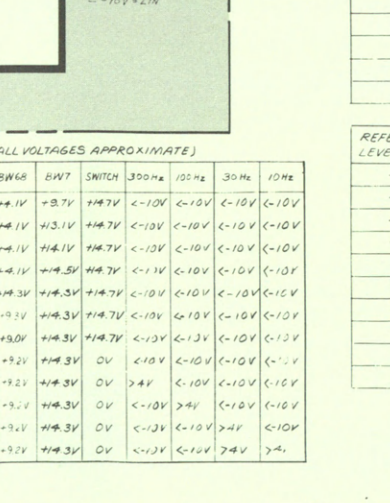
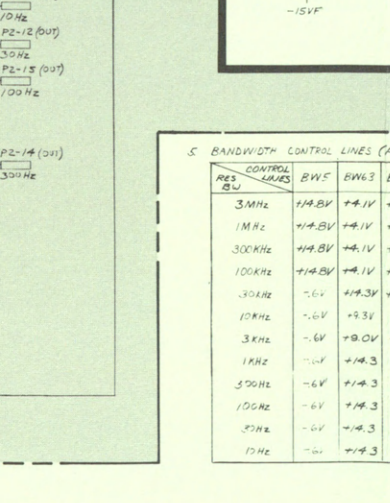
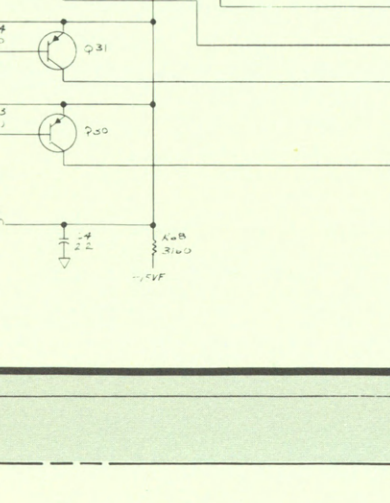
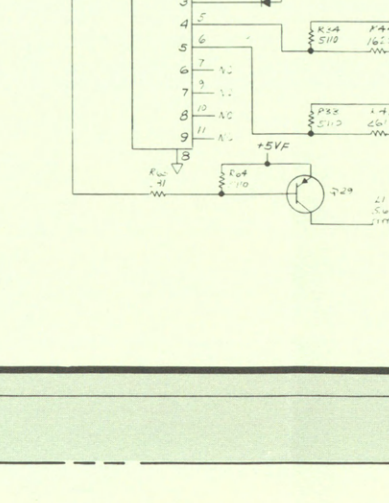
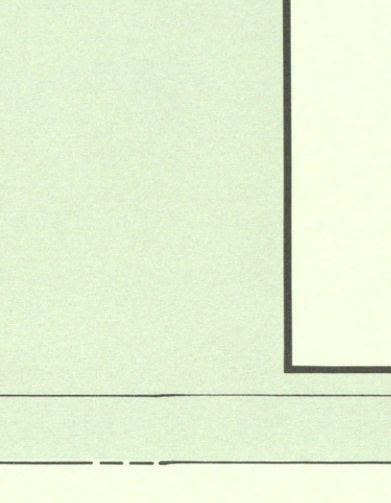
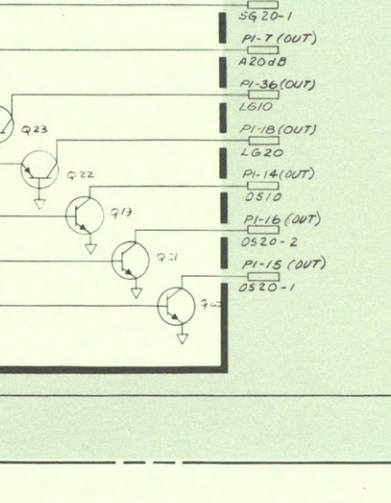
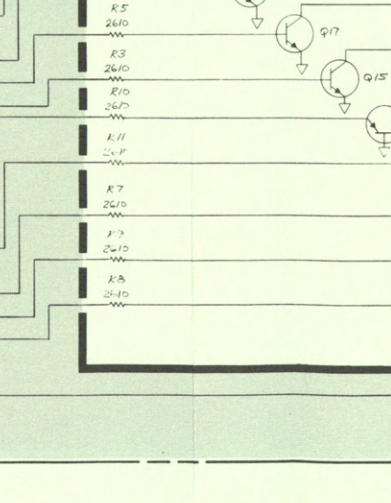
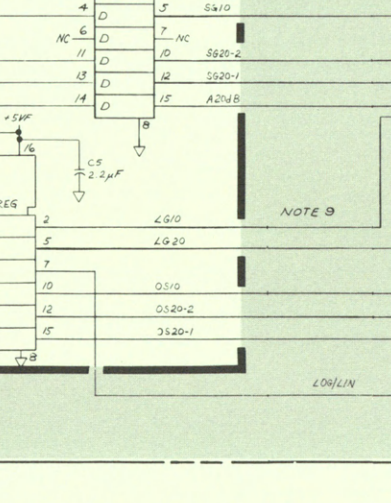
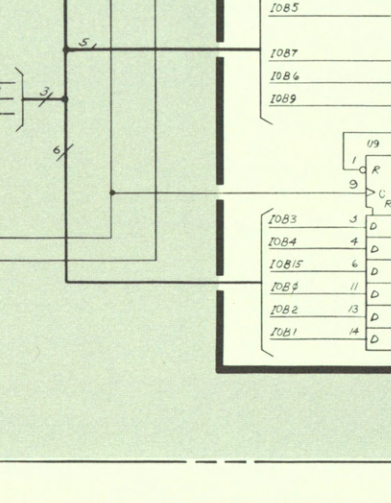
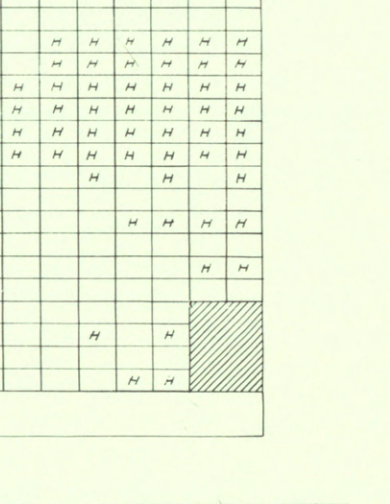
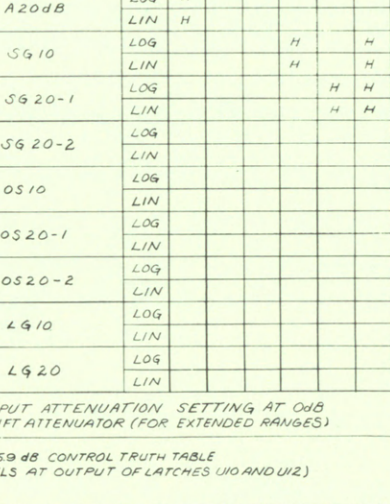
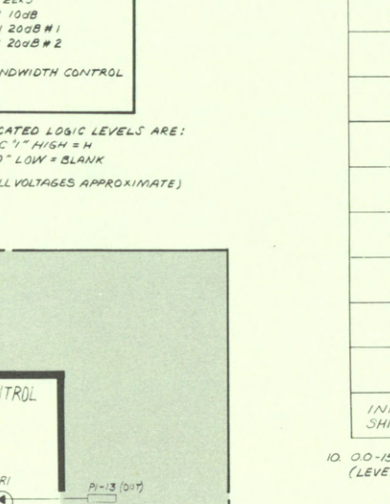
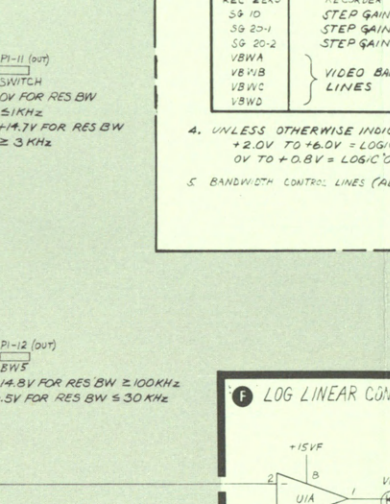
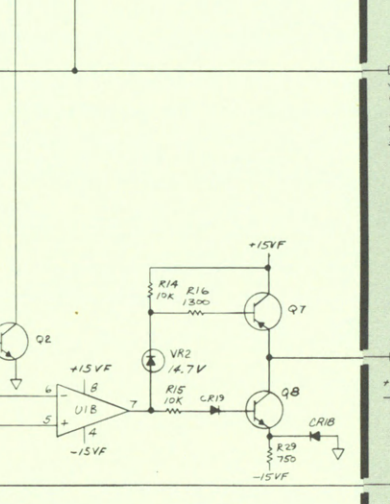
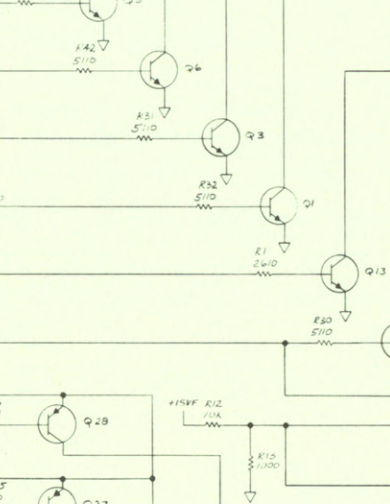
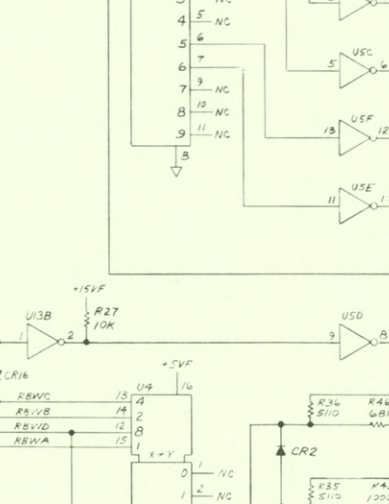
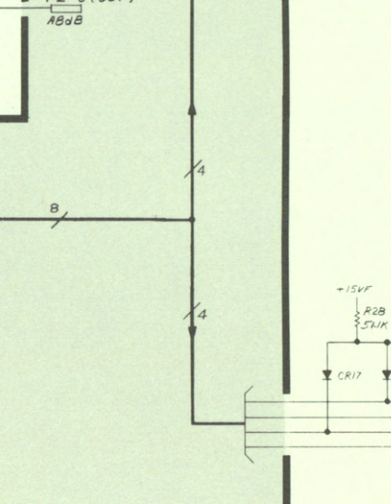
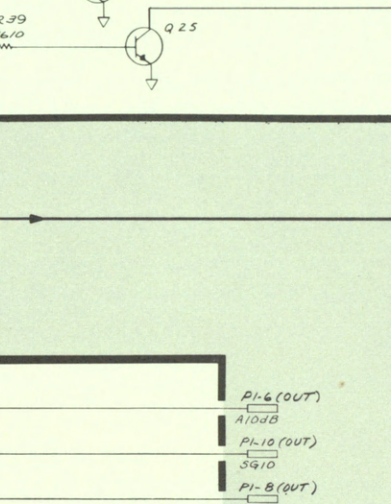
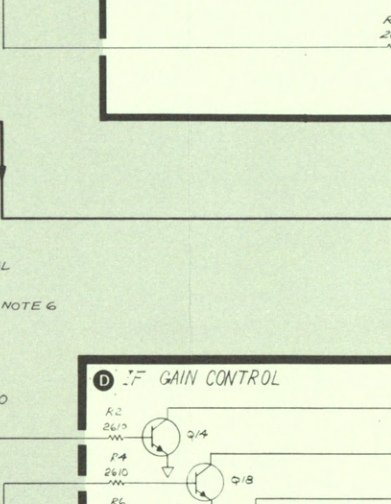
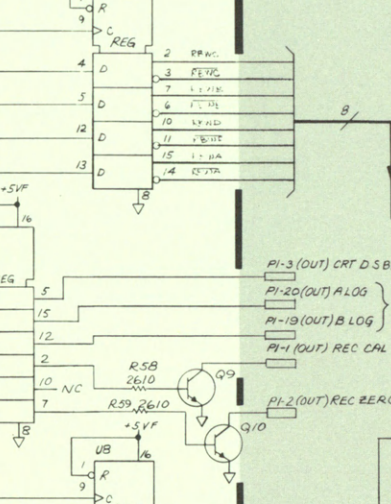
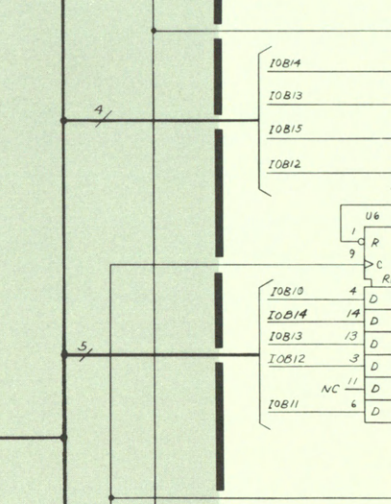
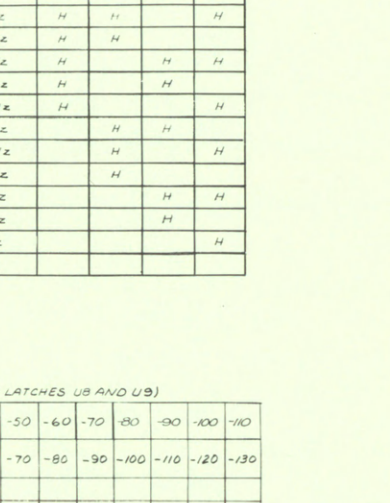
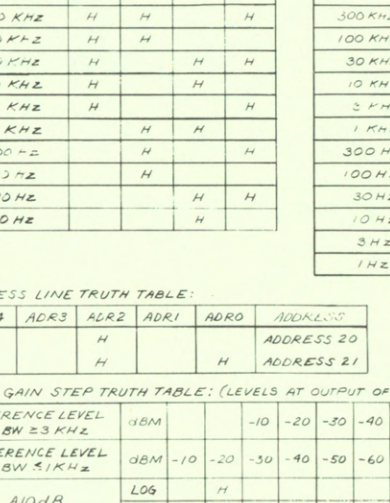
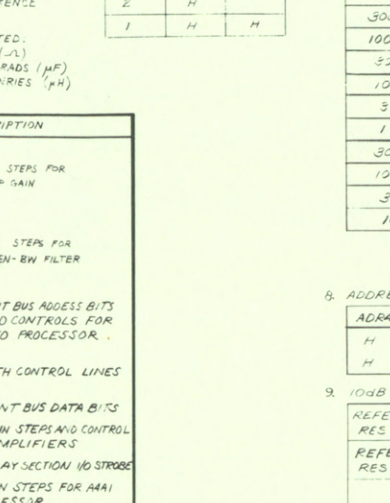
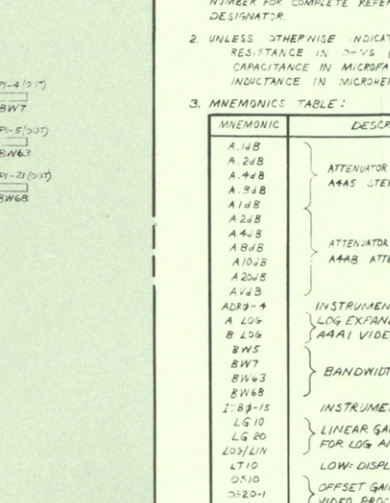
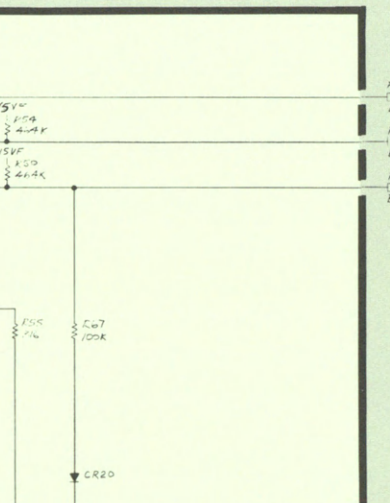
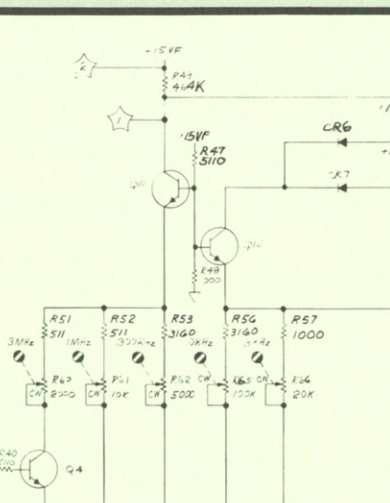
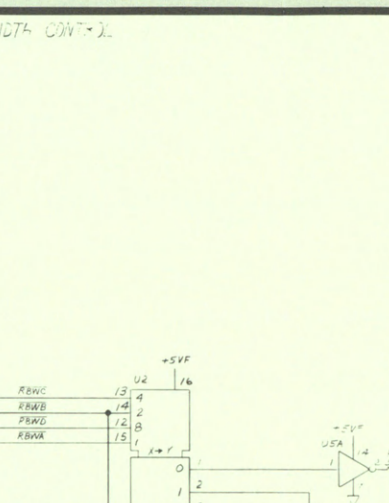
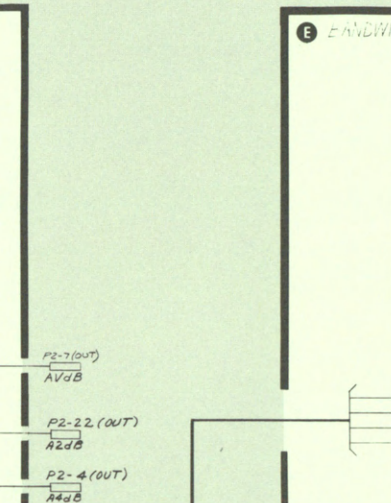
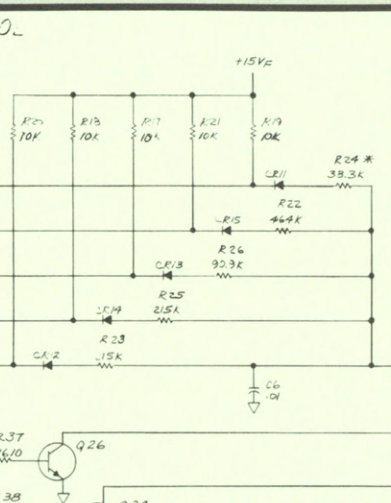
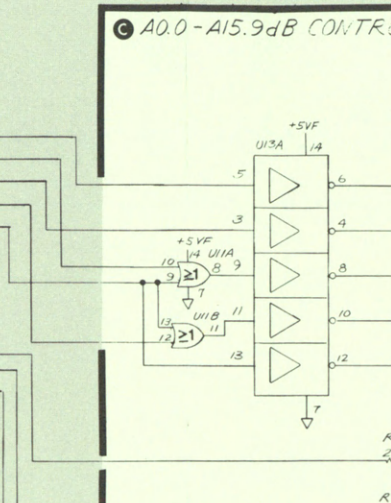
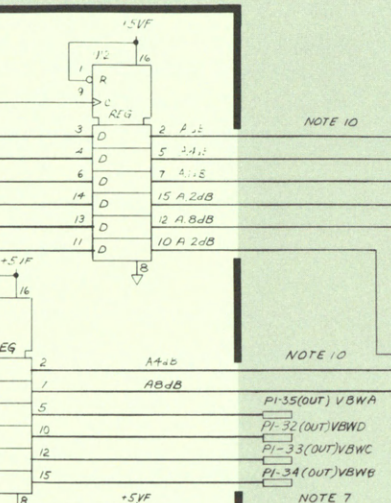
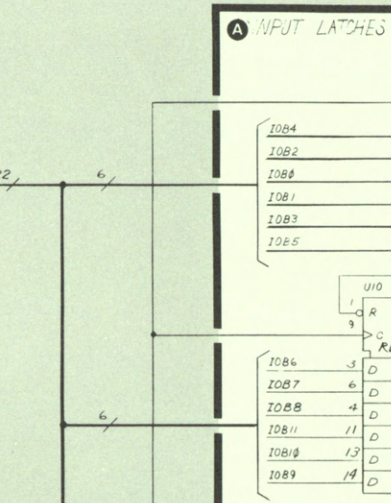
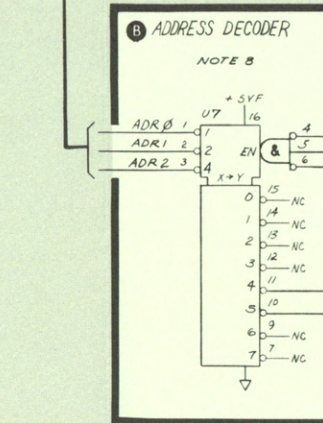
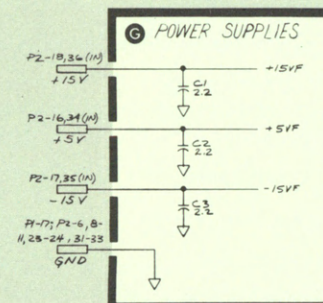
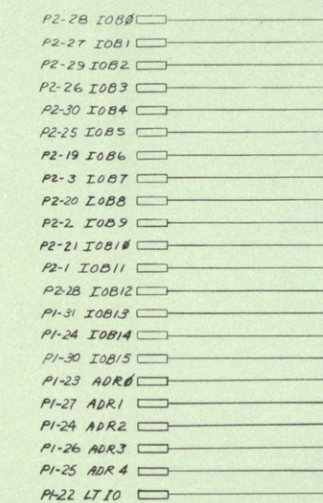
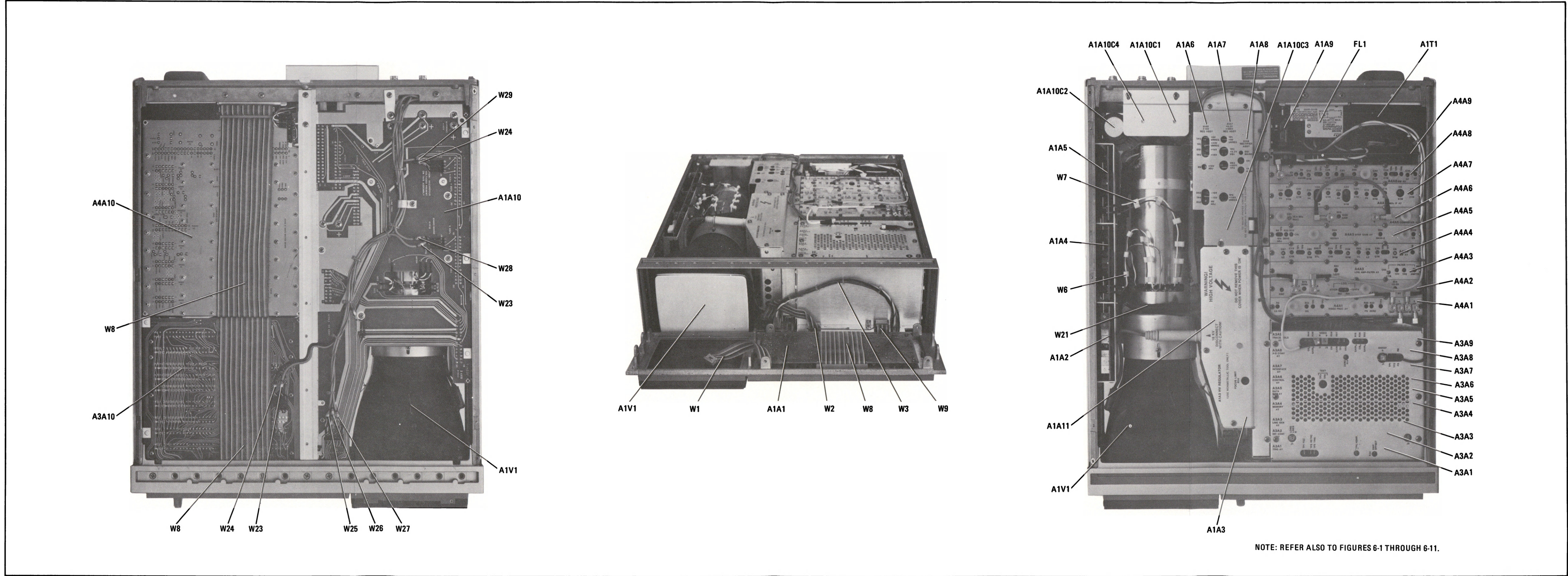
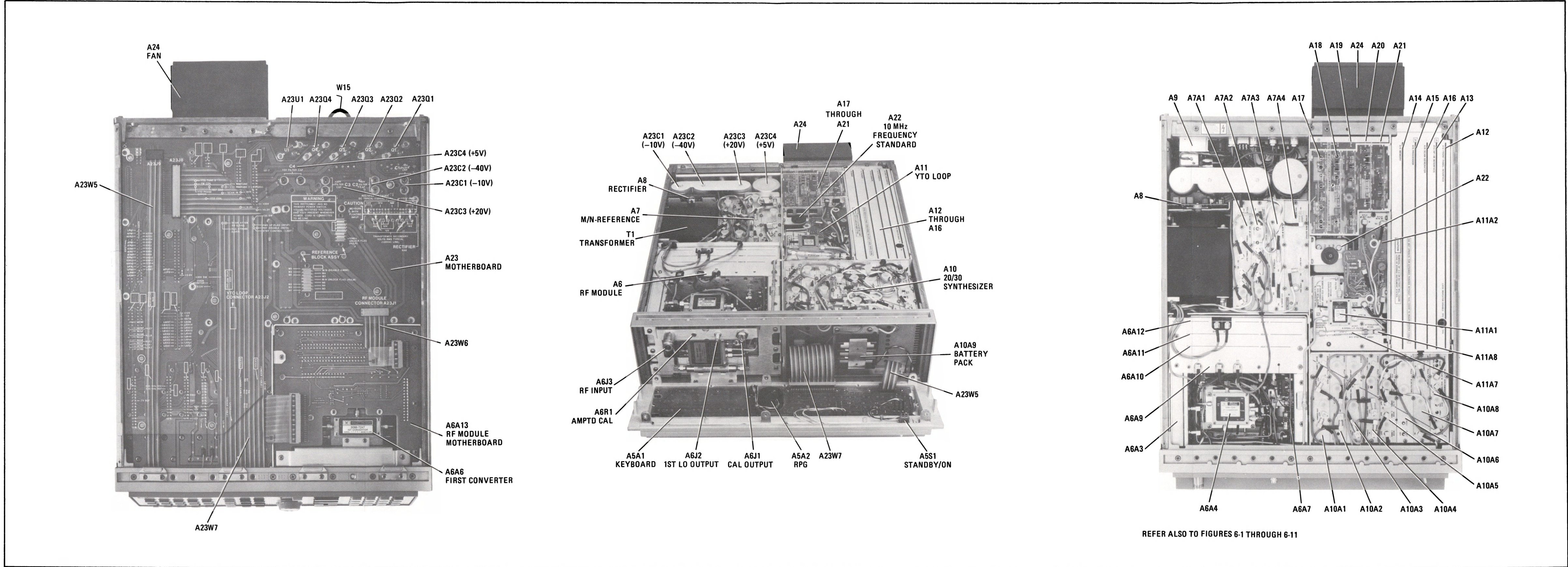


Figure 7-23. A4A9 IF Control, Schematic Diagram (CHANGE 27)



Major Assembly and Component Locations (IF-Display Section)



Major Assembly and Component Locations (RF Section)